Contents

Dual Surgical System

Products

DUAL SURGICAL SYSTEM

Contents

Bone Quality Classification and Bone Quality Checking for Implant Treatment (by Dr.Wang)

Bone quality checking method (Dr. Wang's method)

Evaluate the thickness of cortical bones that have an influence on the success of a treatment and the presence of cancellous bones that have an effect on conditions following the subsequent prosthetics restoration

Primary diagnostic method (to be conducted after formation of flaps)

Enables doctors to identify the presence and thickness of cortical bones before surgery that play the critical role in the success of a treatment and make selection of surgical instruments suited for the bone quality.
Both lateral blades of Magic Split should be aligned mesiodistally. Entering direction of Magic Split should be aligned with longitudinal axis of alveolar bone. Examine the response of cortical bone on the region by applying Magic Split (gentle tapping only by wrist). By doing so, hard bone/soft bone/very soft bone can be classified.

Secondary diagnostic method (to be performed after formation of fixture holes)

Enables doctors to classify bones according to the conditions of the cancellous bones around the fixture holes which may affect the success of implantation following the prosthetics restoration. They can use graduated spoon excavators (purchasable accessories) to examine the presence of cancellous bone on the walls of the fixture holes.

The Bone Quality Classification for Implant Treatment (Dr. Wang's Bone Classification)

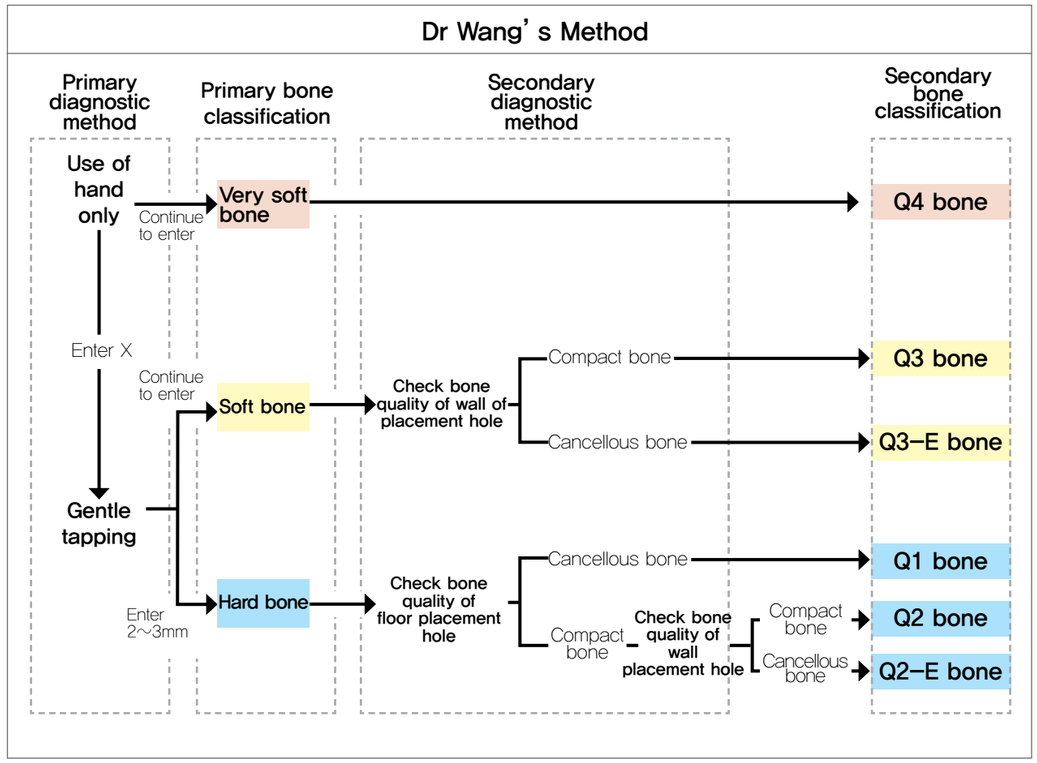
A different technique/treatment plan should be performed according to each bone quality. After implant placement, bone quality of a patient should be recorded in the chart to plan for the prosthetics restoration period.

Bone classification method

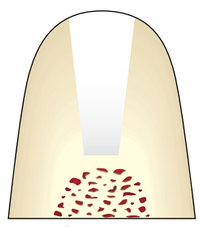
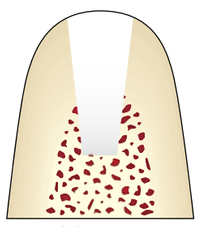
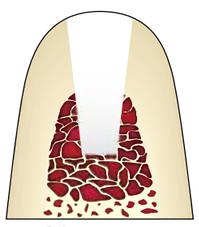
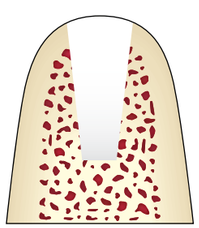
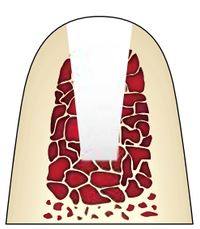
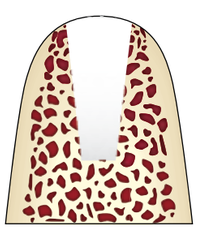
1. Bone quality (bone which surrounds placement hole only, NOT the entire conditions of the jawbone) is classified (alveolar crest down to 15mm)
2. A primary bone classification was made according to the thickness and presence of cortical bone that has an influence on the success of implant surgery.
3. A secondary bone classification was made according to the presence of cancellous bone that has an effect on the successful result of an implantation procedure after prosthetics restoration.
4. Bone quality is classified in order to practitioner to clearly notice during surgical procedure.

Advantages

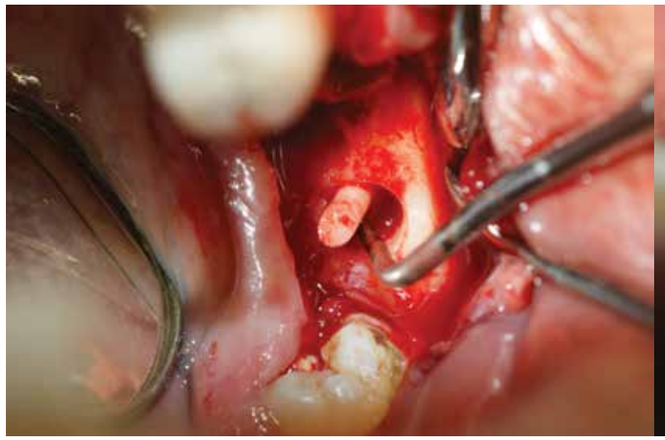
1. Bone quality is distinguished by thickness of cortical bone and whether bone trabecular exists or not which is critical for successful implantation.
2. Existence of cortical bone can be acknowledged before installing the fixture so that precise treatment and diagnoses depend on each bone qualities is possible.
3. Time for prosthetics restoration can be estimated based on the characteristics of bones and a treatment approach for each bone quality.
4. Doctors are able to perform implant surgery with ease and thus reduce failures in implant surgery because they can assess bone quality easily



Dr. Wang's Bone Classification

Secondary diagnostic method	 Q1 bone	 Q2 bone	 Q2-E bone	 Q3 bone	 Q3-E bone	 Q4 bone
Response of cortical bone	2–3mm penetration into cortical bone during bone quality checking (by gentle tapping)			Continue to enter in cortical bone in weak tapping in bone quality checking		Enter smoothly without tapping in bone quality checking
Thickness of cortical bone	Hard cortical bone			Thin cortical bone(Less than 2~3mm)		No cortical bone
Primary diag-nostic method	Hard bone			Soft bone		Very soft bone
Drilling Method	Counter Sink (Option)	Regular Drill		Small Drill		Tapping System
GBR			Bone Marrow Replacement		Bone Marrow Replacement	
Loading period	Possible for immediate loading	Possible for immediate loading if thickness of cortical bone is more than 5mm		Delayed loading		
Surgical method	1,2 stage surgery				necessary for 2 stage surgery	

3 Techniques for Dual Surgical System

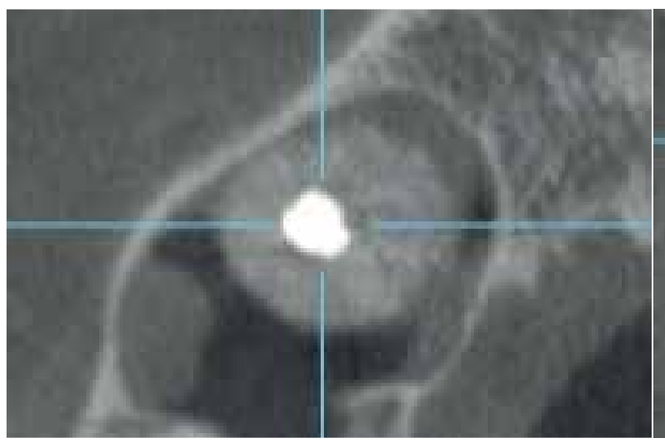
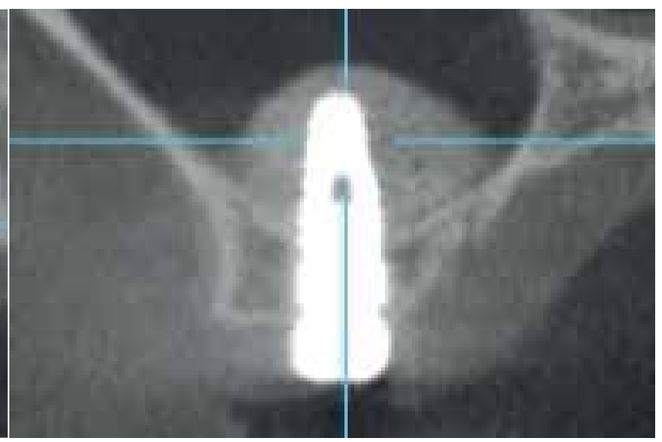

• P.B.R Technique

– The placement hole can be made by one–time drilling which reduces surgery time.
– Perfect round shape placement hole is possible which allows clinicians to prevent failure factor that may occur on cortical bone.
– The bone remaining in the center of the drill maintains the direction, preventing it from shifting.
– The drilling concept has been changed from removing/eliminating to cutting–out concept that P.B.R tech cut out minimized bone and save bone block to re–use it during surgery.



• B.E.B Technique

– A technique intended to compress cancellous bone and bend cortical bone in order to expand the narrow bone width.
– It can minimize the bone fracture by reducing condensation force and loading that occur during bone expansion.
– No worry for bone loss and no need for additional bone grafting.
– A fixture hole with a desired depth can be formed without any damage as the surgical instrument does not come directly into contact with the anatomical structure.
– Surgery time is short.

• C.M.C Technique

– Clinicians can hold and push the bone fragment attached to the sinus membrane using the surgical instrument so they can lift the membrane to a desired height regardless of the height of the remaining bone and also control forces directly to reduce the possibility of it being perforated.
– Bone grafting materials are to surround the fixture completely during GBR.
– No need to use bone grafting materials excessively.

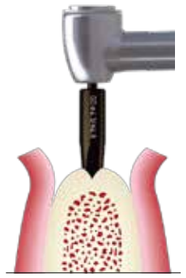
P.B.R Technique (Peripheral Bone Removal Technique)

Indication :
To form a placement hole in soft bone
To form a placement hole in hard bone

Step1. Position Marking

Magic Marking Drill

①



– Use Magic Marking Drill from Magic Kit

– Indentation on alveolar ridge by applying the instrument up to triangular cone shaped blade.

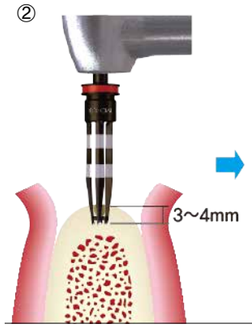
Aesthetics aspects considered	Aesthetic aspects not considered
Distance between two implants – 3mm in minimum	Distance between two implants – 2mm in minimum
Distance between an implant and natural teeth – 1.5mm in minimum	Distance between an implant and natural teeth – 1mm in minimum
Bone thickness of buccal side of the implant – 2mm in minimum	Bone thickness of buccal side of the implant – 1mm in minimum
Bone thickness of lingual side of the implant – 11mm in minimum	Bone thickness of lingual side of the implant – 11mm in minimum

Step2. Decision of direction and depth (Use of Magic Drill)

– Magic drill size will be selected as below according to the primary bone quality diagnostic method.
– Use Magic Drill in Magic Kit (Drill stopper is not included in Magic Kit)
– Make up&down movement during drill for every 3–4 seconds. (Do not use wrist). Intermittently apply vertical pressure during drilling(Bone dancing).

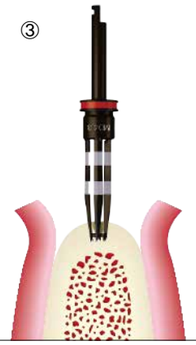
Magic Drill

②



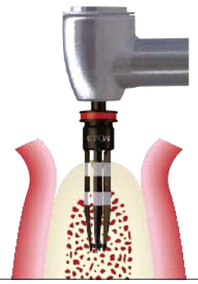
Decide the direction by fixing Magic Drill in the groove formed after use of Magic Marking Drill. Drill up to 3–4mm depth along with decided direction, giving vertical pressure.

③



Insert Magic Drill into 3–4mm depth hole and check the direction.

④



Form the placement hole to the required depth along with confirmed direction.

Selection of drill diameter

Fixture diameter	Ø3.0mm	Ø3.5mm	Ø4.0mm	Ø4.5mm	Ø5.0mm	Ø5.5mm	Ø6.0mm	Ø6.5mm
Drill diameter for hard bone	MD2.8	MD3.3	MD3.8	MD4.3	MD4.8	MD5.3	MD5.8	MD6.3
Drill diameter for soft bone	MD1.8	MD2.8	MD3.3	MD3.8	MD4.3	MD4.8	MD5.3	MD5.8

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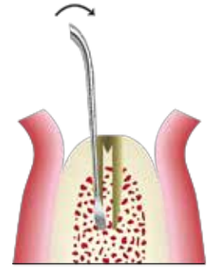
Step3. Placement hole formation and secondary bone classification.

– Remove bone core using spoon excavator and check bone quality of placement hole wall.
– If primary bone quality checking comes out to be cortical bone, use Magic Depth Drill to check floor bone.

⑤ Placement hole formation

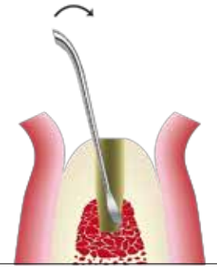


Remove bone core by inserting Spoon excavator into the placement hole mesiodistally as much as the length of fixture.

⑥ Checking bone quality of the placement hole floor(hard bone)

If the floor bone is cortical bone, it is Q1. If it is cancellous bone, check bone quality of wall for further bone quality identification.

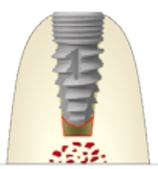
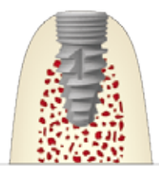
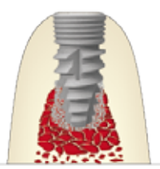
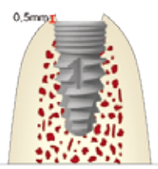
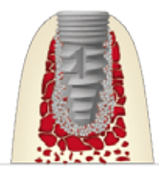
⑦ Checking bone quality of the placement hole wall(soft bone, hard bone)



In hard bone, if you don't feel bone quality against the placement hole wall, it is Q2–E bone, otherwise it is Q2.
In soft bone, if you don't feel bone quality against the placement hole wall, it is Q3 bone.

Step4. Secondary bone quality checking and fixture placement

– Place the implant according to feature of each bone quality upon checking bone quality of placement hole.
– Bone level if it is Q1, Q2, Q2–E, Q3–bone. For Q3 bone, place 0.5mm sub–bone level.
– 2–stage surgery must be performed for Q3–E bone.
– When the implant is placed by motor, 20–30rpm is recommended.

Q1 bone	Q2 bone	Q2–E bone	Q3 bone	Q3–E bone
				
To prevent micro–fracture during placement, drill 0.5–1mm deeper than the length of a fixture and then place implant to bone level.	If the thickness of cortical boneis more than 5mm, immediate loading is possible.	If the thickness of cortical bone is less than 5mm, remove bone marrow tissue with Spoon excavator and then do bone marrow replacement. After that, place fixture to bone level.	Place fixture 0.5mm deeper than bone level.	Remove bone marrow tissue withSpoon excavator and then do bone marrow space replacement. After that, place fixture to bone level. (Be cautious of implant falling into the bone.)
Slightly apply vertical pressure on fixture during placement.			Do not apply any vertical pressure on fixture during placement.	

B.E.B Technique
(Bone Expansion with Bending of cortical bone)

Indication
case1. Placement hole formation in Q4 bone
case2. Bone width expansion in soft bone
case3. Bone width expansion in hard bone
case4. Prevention of damaging anatomical structure

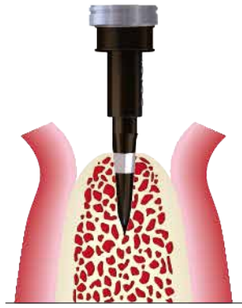
Features
1. This technique is developed, considering feature of alveolar bone structure and mechanical analysis.
2. Can effectively minimize the need for GBR.
3. Can minimize damage in anatomical structures

Precautions
1. 2–stage surgery must be performed.
2. Additional bone healing period should be extended to another 1–2 months and do not do early loading.
3. Check if there is fracture line and bone grafting must be used and sutured for fractured area.
4. Tapping must be conducted with wrist–only force.

Case 1. Fixture placement in Q4 bone

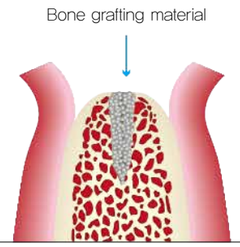
1. The way to secure initial stability should be considered and formation of bone tissue is necessary for fixture to endure masticatory force after prosthetics restoration.
2. If the instrument is not proceeded further with hand force during bone grafting, use tapping instrument with very gentle tapping.

① Initial hole formation (Use of Magic Split)



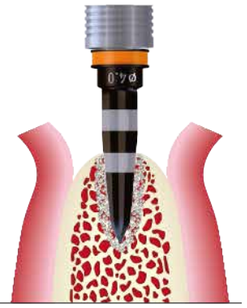
Form the initial hole by apply–ing Magic Split 1mm deeper than the length of fixture.

② Bone grafting



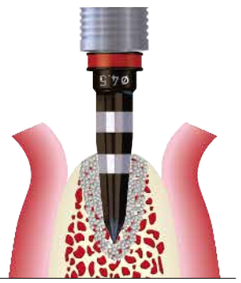
Insert bone grafting material into the initial hole made by Magic Split.

③ Bone grafting inside of bone marrow space (Use of Magic Expander 4.0)



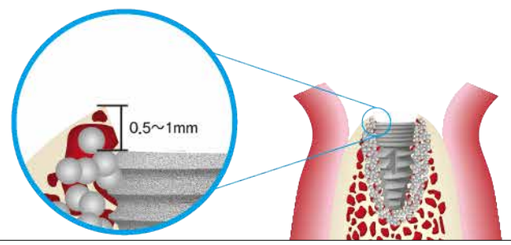
Apply Magic Expander 1mm deeper than the length of fixture. If this procedure is repeated 2–3 times bone grafting material would be sufficiently grafted inside of bone marrow space.

④ Formation of the placement hole (Use of Magic Expander 4.5)



Make the previous placement hole larger by using a bigger size Magic Expander.

⑤ Fixture placement (one size bigger fixture–5.0)



Set the placement direction in advance, so the direction would not be shifted during place–ment and initial stability would not be weakened.
Also, place implant 0.5–1mm deeper than bone level to prevent failure by external force after placement(2–stage surgery should be performed).

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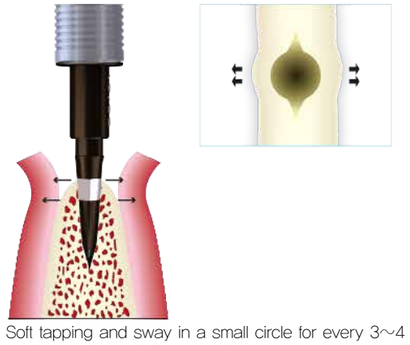
Case 2. Bone Expansion in Soft Bone

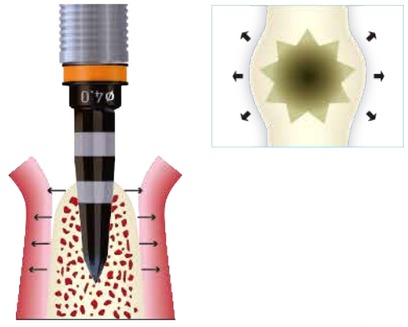
– For soft bone, cortical bone thickness is thin and 1∼1.5mm bone expansion without fracture is easy.
– Soft tapping (use of wrist only) must be followed and if the instrument does not proceed further, the drill one size smaller than that of expander should be used to remove the a bit of bone inside.

① Initial hole formation



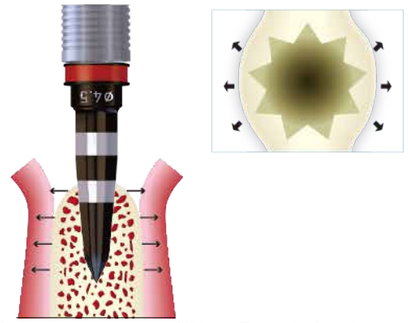
Soft tapping and sway in a small circle for every 3∼4 tapping and repeat the procedure.
Proceed 0.5mm deeper than the length of pre–deter–mined implant

② First expansion



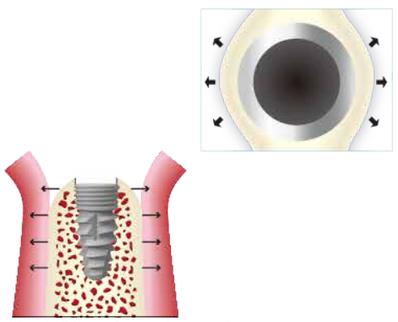
Gentle tapping should be performed with Magic Expander. After 3–4 times of tapping, move the instrument in a circle and continue tapping. Proceed Magic Expander up to the length of fixture.

③ Second expansion



During bone expansion, if Magic Expander is not proceed–ed smoothly with gentle tapping, use one size smaller Magic Drill than that of Magic Expander to remove a bit of inner bone mainly toward mesio–distal side and continue tapping. Proceed Magic Expander up to the length of fixture.

④ Fixture placement



Check if there is any fractured area.
If the fractured line exists, the region should be covered by bone grafting material. Place fixture 0.5mm deeper than bone level.

Selection of Expander size

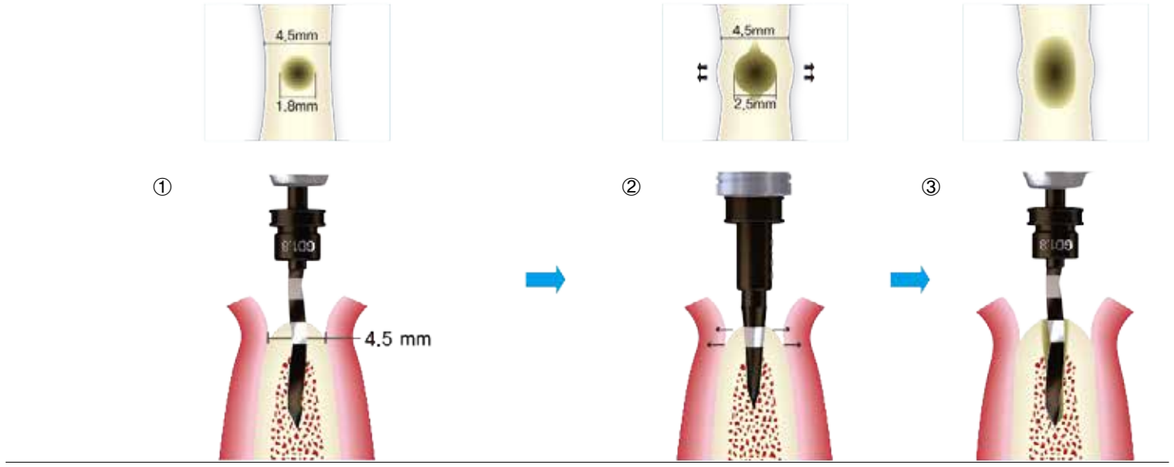
Do primary bone quality checking before surgery and select Magic Expander size as below according to the result.

Fixture diameter	Ø4.0mm	Ø4.5mm	Ø5.0mm	Ø5.5mm
Selection of Expander on very soft bone	ME30	ME35	ME40	ME45
Selection of Expander on soft bone	ME40	ME45	ME50	ME55
Selection of Expander on hard bone	ME40	ME45	ME50	ME55

* The placement of Ø3.0mm and Ø3.5mm N.R.Fix (mini implant) is described on N.R.Fix section.

Case 3. Bone Expansion in Cortical Bone

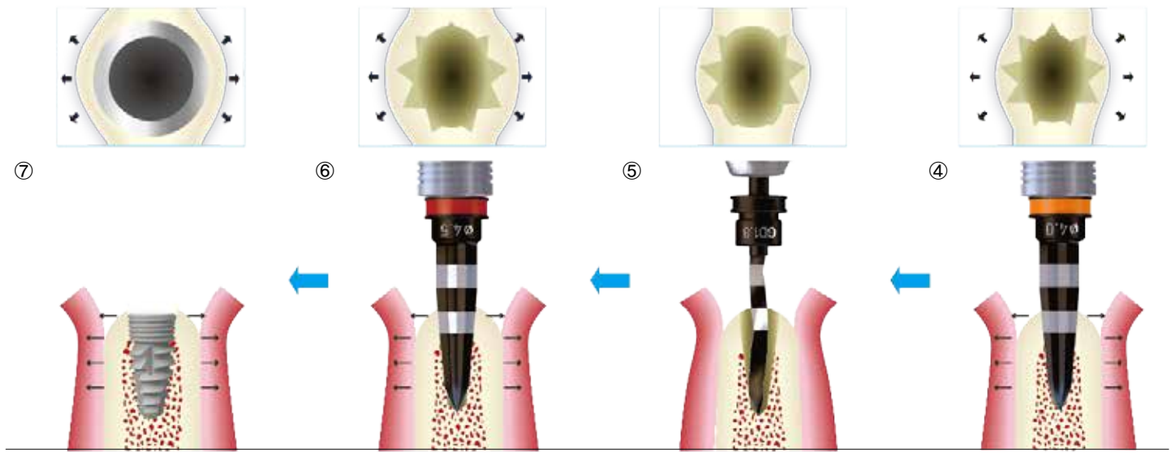
- A hard bone has thick cortical bone which will resist bending and expanding. Accordingly, its cortical portion must be made thinner through drilling and thus have qualities similar to those of a soft bone. The mesiodistal cortical bone won't be pushed and expanded so it should be completely removed (of a portion equal to the diameter of a fixture) through drilling.
- As hard bone cannot be expanded due to thick cortical bone, we need to make cortical bone thinner with drilling.
- When making an initial hole, drill size should be 2–3mm smaller than bone width.
- Drill used for bone expansion should always be smaller than that of tapping instrument



Drill 1mm deeper than pre–determined implant using 1.8 guide drill and make an initial hole for Magic Split. If bone width is larger, bigger size drill can be used for initial drilling.

Apply Magic Split up to the length of implant by gentle tapping. Bone expansion takes place and cortical bone of mesiodistal side is incised.

Apply 1.8 guide drill and remove mesiodistal cortical bone and form oval shape placement hole.



Place Ø4.5 fixture 0.5mm deeper from its bone surface. If there is a fracture line, do bone grafting and suture.

Apply Magic Expander 4.5 with gentle tapping up to the length of implant.

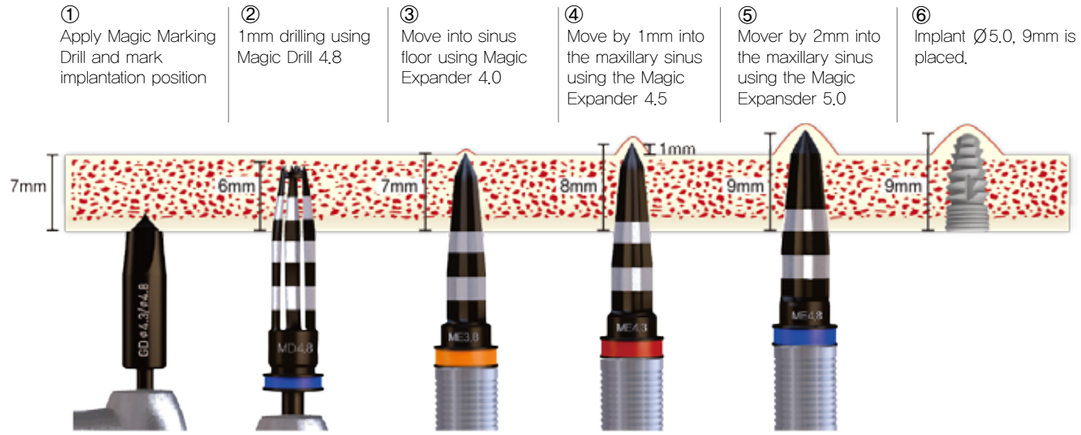
Apply 1.8 guide drill to remove incised mesiodistal cortical bone. Use of Magic Drill 3.5 could be more convenient.

Apply Magic Expander 4.0 up to the length of implant. Soft tapping must be performed.

Case 4. Protection of anatomical structure

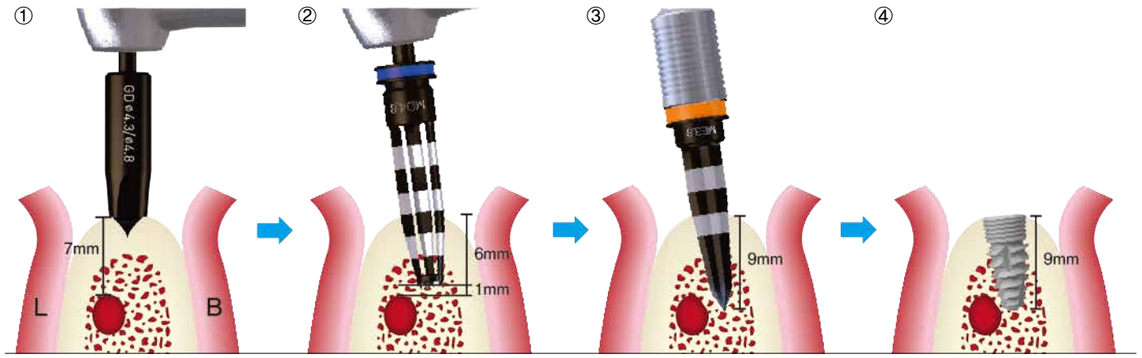
- Instrument does not directly get in contact with anatomical structure which will minimize its damage on anatomical structure

a. Sinus floor 2mm augmentation



b. No damage to inferior alveolar nerve

- Minimize infiltration anesthesia on soft tissue.
- Let the patient raise their left hand when they feel pain during surgery, when the doctor should remove the instrument and change direction and give it another try.
- CT taking is recommended to locate the inferior alveolar nerve on mandible molar area.



Mark placement position with Magic Marking Drill

Apply Magic Drill up to 1mm from the inferior alveolar nerve

Must be gentle tapping and if not proceed further, remove mesiodistal and buccal bone and continue tapping.
If the patient feels the pain, stop tapping and change the direction towards buccal direction.

Give a bit of pressure lingually when placing an implant. The inferior alveolar nerve may be pressed a little but does not contact the fixture directly so it will not suffer any damage.

C.M.C Technique (Crestal approach with Membrane Control)

Indication: When GBR is needed in sinus area

Features

1. Developed considering anatomy of the sinus floor and its mechanical theory
2. Application of GBR of closed defect concept

Advantages

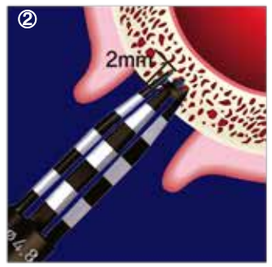
1. Able to hold and detach the membrane to a desired height.
2. No membrane perforation since the instrument does not come into direct contact with the sinus membrane and easy lifting force control
3. Minimally invasive surgery and easy protocol for all dentists
4. Short chair time and cost-effective
5. The instrument can be used regardless of the height of remaining vertical bone.

Precautions

1. Tapping force must be gentle
2. If instrument does not proceed, drill must be used.
3. When the instrument advances into the maxillary sinus, it should stay there until the membrane is elevated to a desired height.

Step 1. Preparation for C.M.C Tech

Magic Marking Drill
In case of residual bone height less than 2mm, apply Magic Sinus Lifter without using a drill.



Use of Magic Drill 4.8
Use of Magic Drill 4.8 up to 2mm from the sinus floor.
More convenient with a use of Magic Drill Stoppers.
(Drill stopper can be purchased for each mm)

Use of Spoon Excavator
Use the Excavator to remove bone core and measure the depth of the hole where the bone is taken out.

Step 2. Sinus lifting with C.M.C Tech

C.M.C Tech begins with Magic Sinus Lifter
Apply gentle tapping only.
Strong strikes will make irregular sinus floor bone block which may lead to sinus perforation.

Fractured bone block bigger than diameter of Sinus Lifter
The sinus membrane is attached to the bone fragment formed, which has the same effect as the instrument directly holds the membrane.

Sinus membrane detached
Care should be taken to advance the instrument very slowly into the maxillary sinus in order to adjust elevating force.

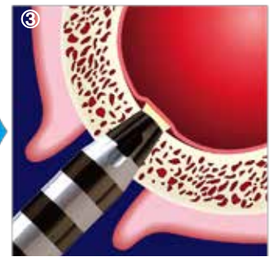
※In case weak strikes don't permit the entry of the instrument

Reason: The mesiodistal bone of the alveolar bone stuck between both sides' blades of the Sinus Lifter is too hard.

Plan 1 Remove bone mesiodistally

Use Magic Drill 4.8 and remove mesiodistal bone of the alveolar ridge

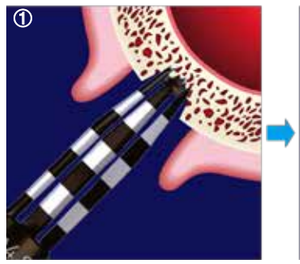
In case mesiodistal bone does not get in contact with the instrument, apply gentle tapping again.



If this method doesn't work, apply another way as below

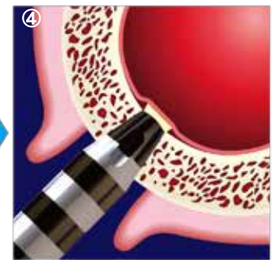
Reason: There is at least 1mm cortical bone in sinus floor, blocking the instrument penetration.

Plan 2 Make indentation for about 0.5~1mm in the sinus floor.



Drill Stopper onto the drill and made indentation of 0.5mm to 1mm more

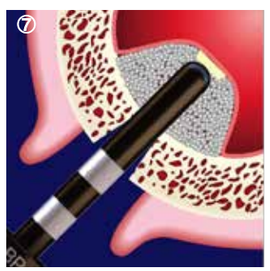
Insert the instrument into the cut space and perform weak tapping



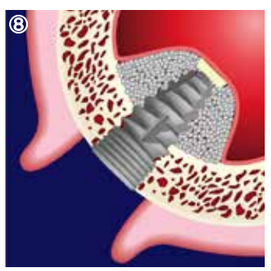
If not working, perform plan 1

Plan 1 ➡ Tapping ➡ Plan 2 ➡ Tapping ➡ Plan 1 ➡
➡ Tapping ➡ Plan 2 ➡ Tapping ➡ Repeat until Magic Sinus Lifter goes into sinus area

Step 3. GBR and implantation stage



Remove the instrument moving mesiodistally a bit and use bone grafting material of 0.05~0.06 per each mm lifting.

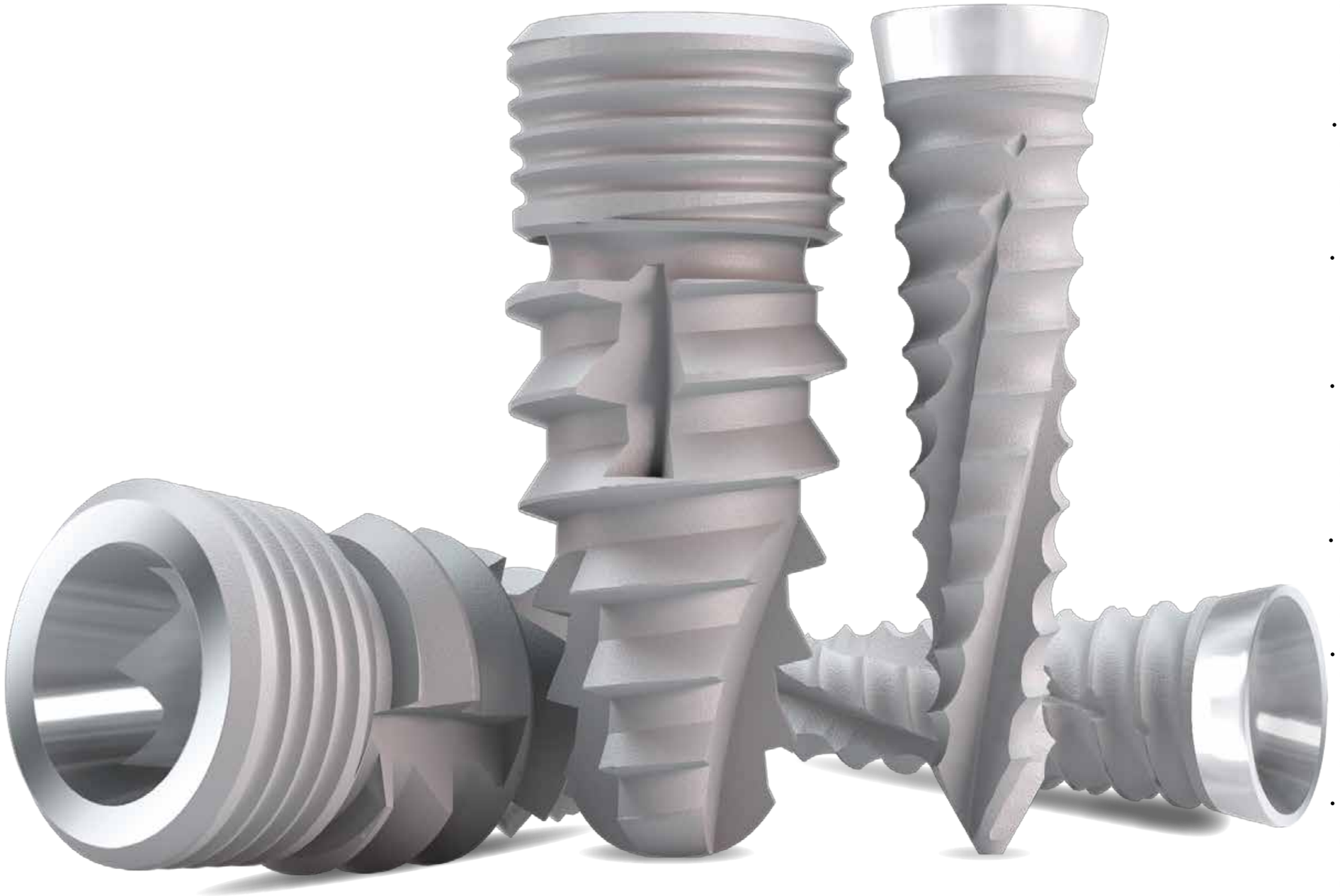


Fixture placement
if residual bone height is less than 3mm, implantation should be made without applying any pressure on the fixture.

Products

Contents

IBS Fixture System



- **Design suitable for anatomical structure of alveolar crest**

  –The fixture has a double–thread structure having 0.6mm pitches on its top side and a single–thread structure having 1.2mm pitches on its bot–tom side so for it as to permit more quantity of cancellous bone between its threads than that of cortical bone at the upper alveolar bone, pre–venting micro–fractures from occurring due to excessive occlusal force.

- **Design that maintains marginal bone by expanded functional surface**

  –Anker groove between upper double thread and lower single thread to increase functional surface to withstand vertical/horizontal pressure to prevent excessive loading on marginal bone

- **Design that guarantees initial stability regard–less of bone quality**

  –A best initial fixation is secured by such factors as the adoption of root–form implants, their upward–widening thread thickness, and the selection of different drill diameters in line with bone quality.

- **Design that prevents implant sinking during implantation**

  –The fixture is designed to have a screw that has thicker threads as it goes upwards so it can advance into soft bone pitch by pitch as it rotates, even without vertical pressure
  (ex: when residual bone height is less than 3mm in sinus area, we can make sure implant doesn't fall into the bone as we do not give any pressure during implant placement)

- **Design that prevents the downward progress of peri–implantitis**

  –Due to Anker groove, upper double thread and lower single thread is not connected that there is no pathway for peri–implantitis to follow through

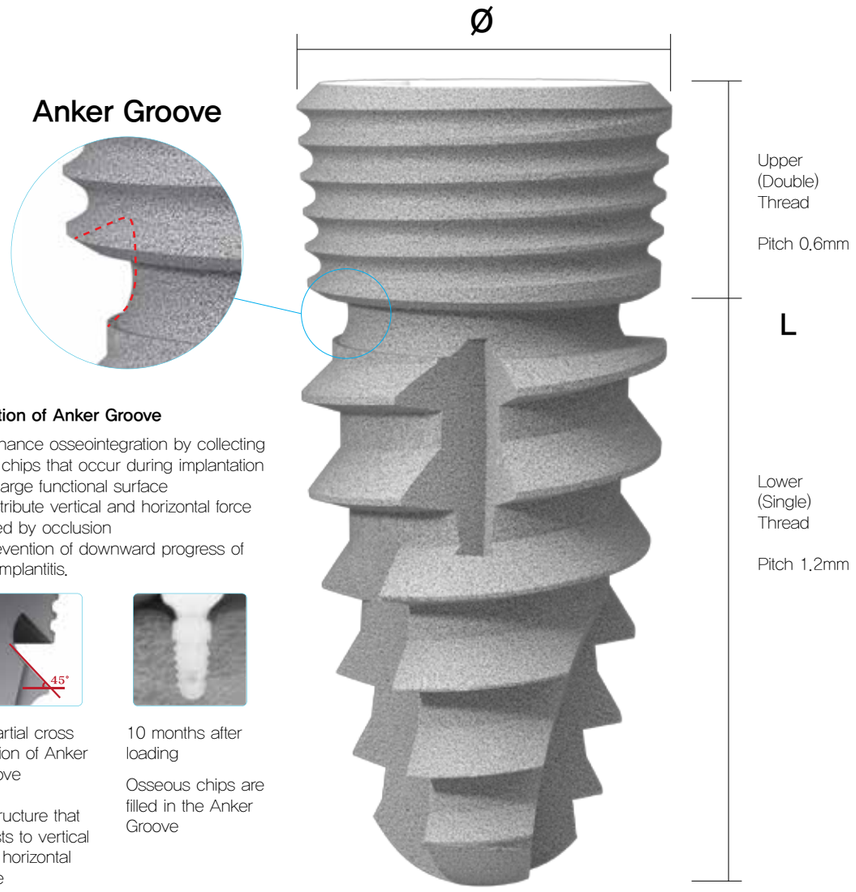
- **Use of internal hex and connection for most convenient and safe form of fixation**

  –Most convenient and safe form of fixation amongst numerous forms of the implant connection with abutments
  –One universal platform for all diameters
  –11 degree internal hexagonal locking completely prevents micro gap and micro movement

- **Maintenance of the ultra–pure surfaces of fixtures and recovery from their biological obsolescence**

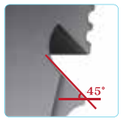
  –Our cutting–edge manufacturing system produces fixtures with ultra–pure surfaces and our advanced cleaning system achieves perfect cleaning.
  –The fixtures kept in Magic On resist their biological obsolescence effectively.

Anker Implant



Function of Anker Groove

1. Enhance osseointegration by collecting bone chips that occur during implantation
2. Enlarge functional surface
3. Distribute vertical and horizontal force caused by occlusion
4. Prevention of downward progress of peri-implantitis.



A partial cross section of Anker Groove

A structure that resists to vertical and horizontal force

10 months after loading

Osseous chips are filled in the Anker Groove

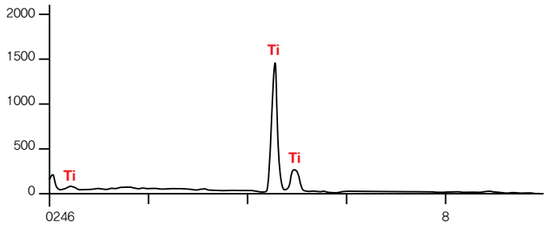
Application of Anker

ANKER							
Applied loaction	Diameter	Length(L)	Code	Applied loaction	Diameter	Length(L)	Code
Maxillary anterior	D-Ø4.0	7	IBS 4007	Molar	D-Ø5.5	7	IBS 5507
		9	IBS 4009			9	IBS 5509
		11	IBS 4011			11	IBS 5511
		13	IBS 4013			13	IBS 5513
Premolar	D-Ø4.5	7	IBS 4507	Molar (After extraction)	D-Ø6.0	7	IBS 6007
		9	IBS 4509			9	IBS 6009
		11	IBS 4511			11	IBS 6011
		13	IBS 4513			13	IBS 6013
Molar	D-Ø5.0	7	IBS 5007	Molar (After extraction)	D-Ø6.5	7	IBS 6507
		9	IBS 5009			9	IBS 6509
		11	IBS 5011			11	IBS 6511
		13	IBS 5013			13	IBS 6513

Use N.R. Fix in mandible anterior part

Our state-of-the-art cleaning system and production methods that require repeated verification enable us to produce fixtures with perfectly clean surfaces.

Full scale counts: 1783



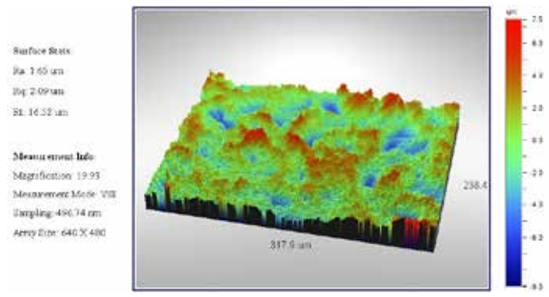
PAT Surface for enhancement of biologic capabilities

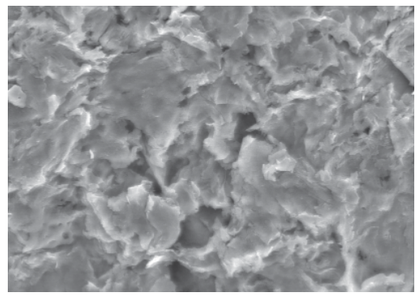
PAT method (P-Photo, A-Activated, T-Treatment) consists in the sandblast processing of implant's surface with particles of calcium phosphate and heating treatment which helps to form crystal structure of TiO2 for better photofunctionalization.

· Takihiro Ogawa : Ultraviolet Photofunctionalization of Titanium Implants 2012 ; 151-158

Adoption of plastic packaging sheets makes it possible to develop packing methods and designs that allow ultraviolet irradiation even without removal of the sheet
· UV illuminator: IBS Magic-On

The most suitable roughness (Ra 1.4~1.8)

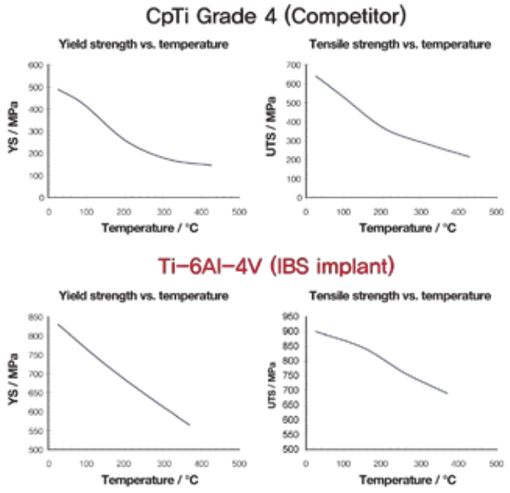


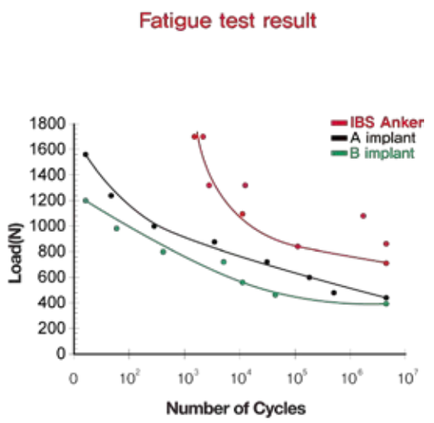


▲ ×2000

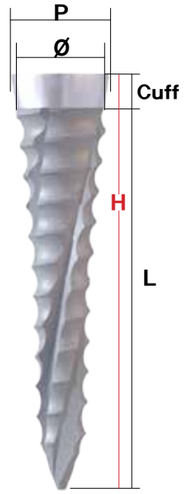
Complete prevention of fracture even for a long term use Gr5 Titanium(Ti-6Al-4V)

-Complete prevention of fracture for all implants and abutments including mini implants
-It prevents 'sinking' problem that occurs for bone level implant.





N.R.FIX



Features

1. Small diameter but compatible with all size abutment
2. Easy implantation by aggressive self tapping
3. Very rigid
4. Prevention of soft tissue sinking from bone resorption (Bone Level Cuff)

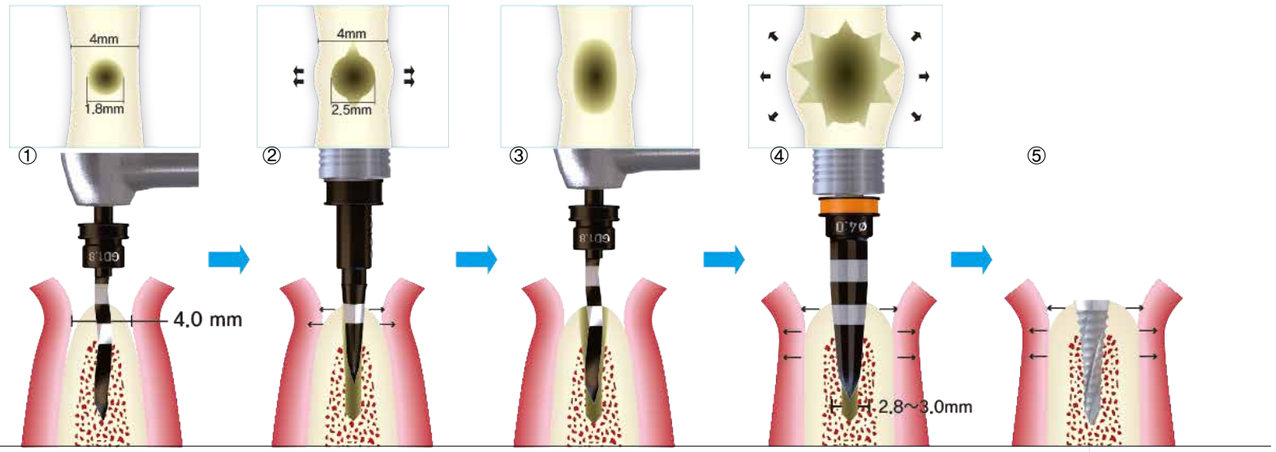
Application

1. Apply when bone width is 4mm or less (usually mandible 6 anterior, maxillary lateral incisor)
2. Apply for implantation for Overdenture

N.R.Fix

Diameter	Cuff(mm)	Length(L)	Height	Code
D-Ø3.0 P-Ø3.8	2	11	13	IBS 3011
		13	15	IBS 3013
D-Ø3.5 P-Ø3.8	1	91	0	IBS 3509
		11	12	IBS 3511
		13	14	IBS 3513

Implantation of N.R. Fix with bone expansion on narrow bone width



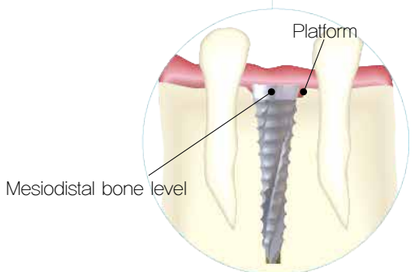
① Drilling depth of 1.8 guide drill
Ø3.0 N.R.Fix : Fixture length + 2mm
Ø3.5 N.R.Fix : Fixture length + 1mm

② Magic Split
Up to 11mm

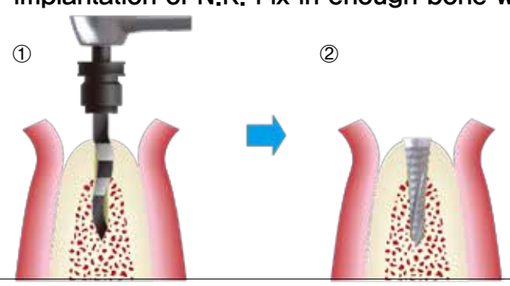
③ 1.8 guide drill
Remove cortical bone
mesiodistally

④ Magic Expander 4.0

⑤ Have the fixture platform placed mesiodistal bone level



Implantation of N.R. Fix in enough bone width

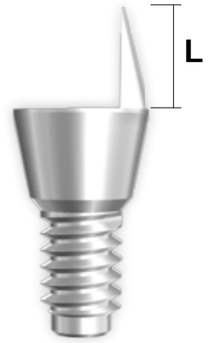


① One time drilling by special drill only for N.R. Fix

② Placement by strong self tapping

Magic Screw

Magic Screw can be used to conduct 1.5–surgery and it allows us to find where the fixture is positioned



Advantages

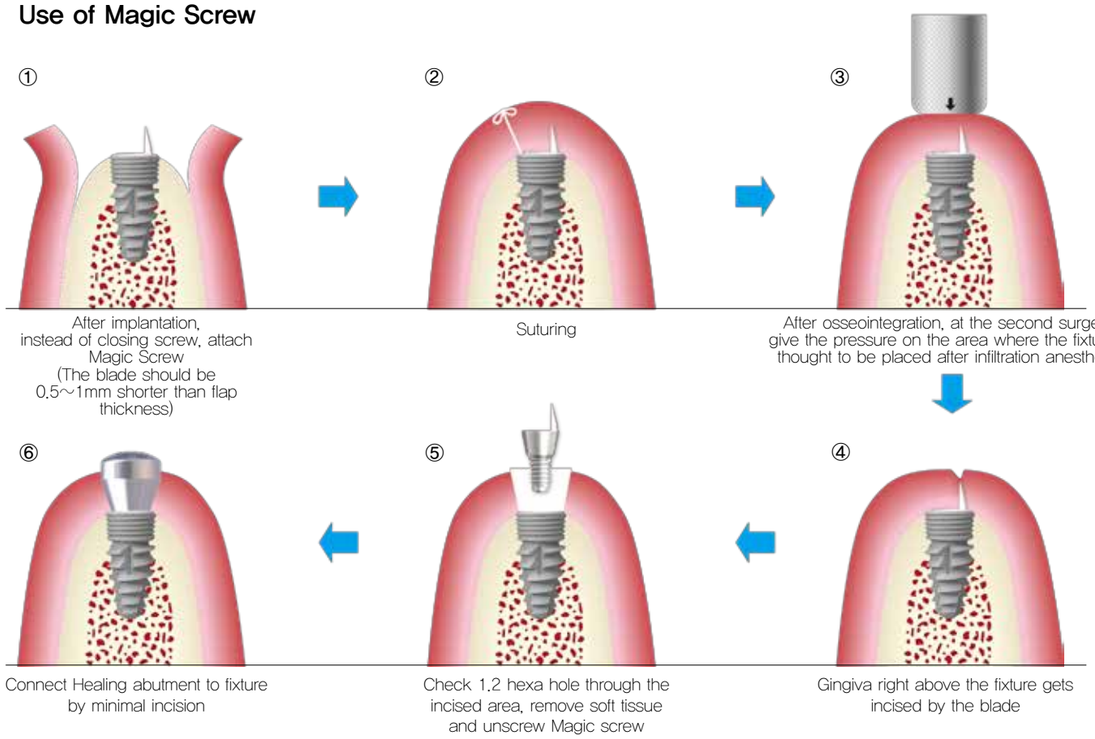
1. Minimally invasive
–Flap formation is not required in second–stage surgery
–Attached gingiva is easy to maintain
2. Simple surgery
–Only a very small incision is required and suture is not needed in second surgery
3. Can prevent the application of harmful pressure to the placed implant when using a temporary denture

Application

Magic Screw

Flap thickness	Length of blade (L)	Code
2~2.5mm	1.5	MS 15
3~3.5mm	2.5	MS 25
4~4.5mm	3.5	MS 35
5~5.5mm	4.5	MS 45

Use of Magic Screw



① After implantation, instead of closing screw, attach Magic Screw (The blade should be 0.5~1mm shorter than flap thickness)

② Suturing

③ After osseointegration, at the second surgery, give the pressure on the area where the fixture is thought to be placed after infiltration anesthesia

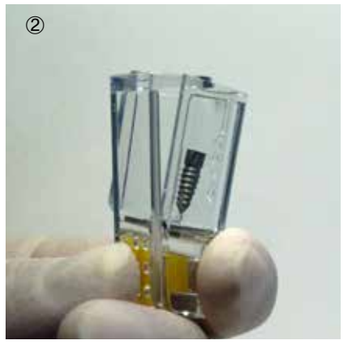
④ Gingiva right above the fixture gets incised by the blade

⑤ Check 1.2 hexa hole through the incised area, remove soft tissue and unscrew Magic screw

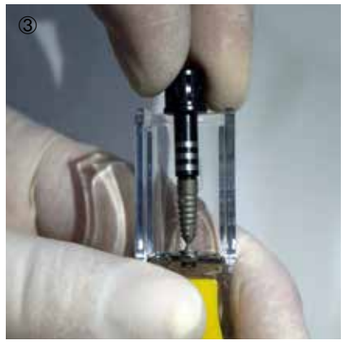
⑥ Connect Healing abutment to fixture by minimal incision

How to use IBS Fixture

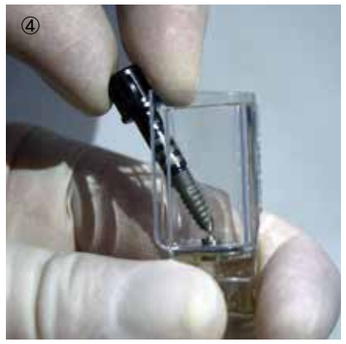
Take out a fixture having a desired size among those that have been kept in the Magic On for more than (cumulative) 50 hours. Tear off the sterilization tape at the bottom of the PET and take out the am–pule and hold it as shown in the picture.



Press the bottom part of the ampule (in yellow color) to separate the front window.

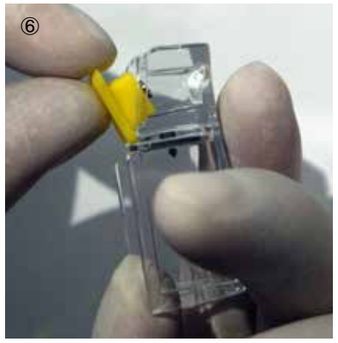


Connect Mount Driver to Fixture

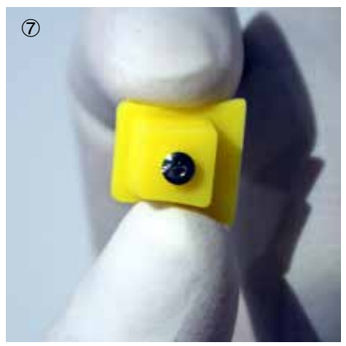


Check if the Mount Driver is securely engaged and bend it towards the removed front window to break off the tip of the fixture.

Take out the fixture from the ampule, spray an adequate amount of saline solution and place it into the placement hole that has been formed in the patient’ s tooth.



Remove the yellow colored silicon



You will find a closing screw inside

Connect 1.2 hexa driver into 1.2 hexa hole

Remove Closing Screw from the yellow silicon block and place it onto the fixture placed.

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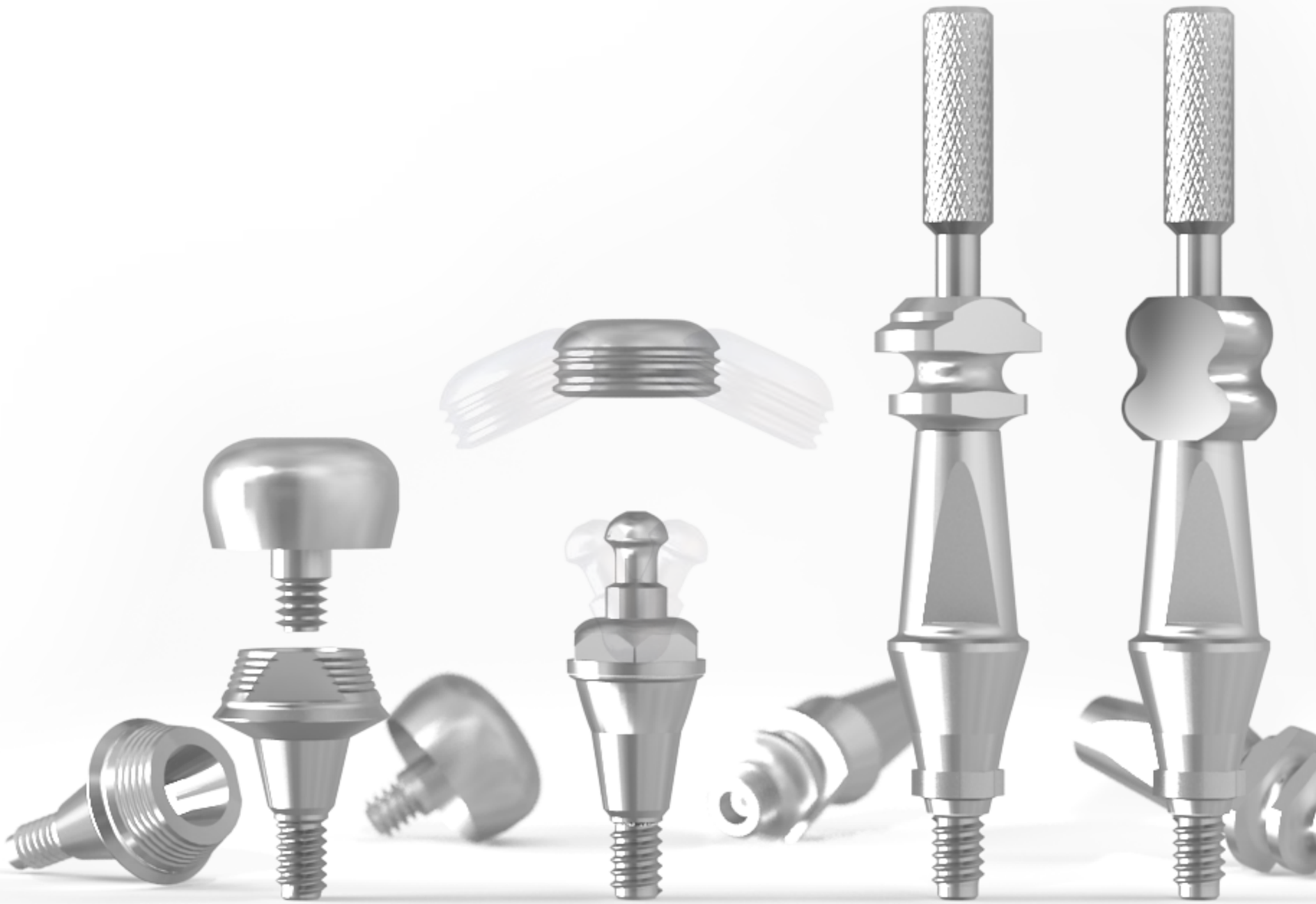
Magic Prosthetics System



- **The prosthetics system that has inde-pendently been developed after years of research and recognized of its technology through resulting patents**

- **The first abutment which allows all forms of crown to be attached-Magic Abutcore**

  -Since abutment is already milled for all cases so no need for milling
  -All forms of prosthesis can be attached.(Largely angulated prosthesis, Low vertical height, Customized Core Abutment)
  -Perfect soft tissue sealing is possible

- **Articulate impression through a simple procedure-Magic Abutcoping**

  -4 functions in 1 piece
  (Abutment + Lab analog + Impression coping + Prevention of screw loosening)

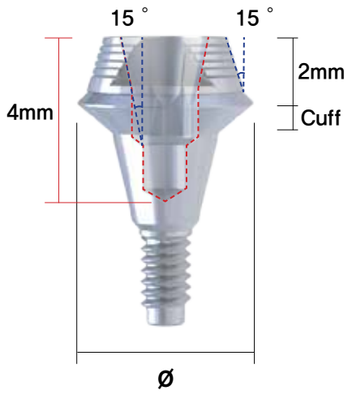
- **Disadvantages of existing overdenture sys-tems have been perfectly resolved.-Magic Mushroom + N.R. Fix**

  -Dispersion of the occlusal force transmitted to fixtures by permitting sliding movement to the denture during occlusion.
  -Compensation of possible errors by the dentist by means of moving heads permitting movement in all directions.
  -Long, adequate maintenance using undercut retentions
  -Easy and simple implantation thanks to one-time drilling

Magic Abutcore

The first abutment which allows all forms of crown to be attached

New concept of abutment for Post Crown and Post customized abutment



Functional structure of Magic Abutcore

a. 2mm of post height which enables all forms of prosthesis can be attached
b. 3mm of depth which provides large cementation extent and prevents rotational movement
c. 15 degree angles from inside/outside of abutment enables even crown with tilted angulations to be attached
d. Solid type Abutcore minimizes a chance of screw loosening

Advantages

1. No need for milling
– Abutment is already milled for all cases

2. All forms of prosthesis can be attached
– Low height post enables all forms of prosthesis to be attached

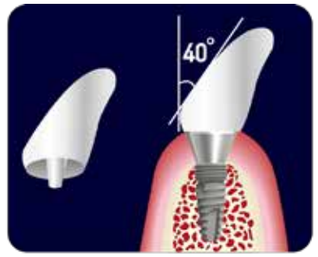
3. Possible for an aesthetic prosthesis
– prosthesis is possible by attaching Casting Customized abutment first.

4. Perfect soft tissue sealing
– Reduce possibility of downward progress of peri-implantitis
– Improves marginal bone maturation
– No need for healing abutment

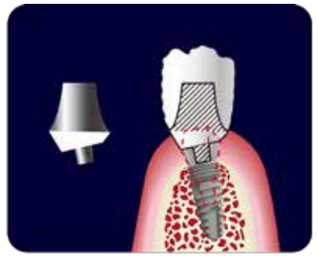
5. Prosthesis procedure is simple.

Indication

1. When the vertical height with the opposing tooth is low

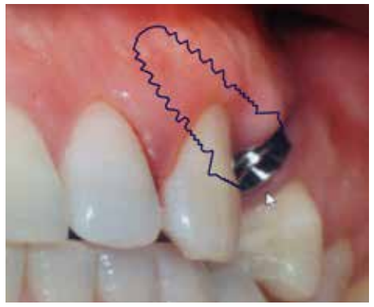


2. When the largely angulated prosthesis is in need



3.Casting Customized Core Abutment for aesthetic prosthesis

Clinical Case



Placement of Magic Abutcore

Fixture was tilted for 50 degrees. No possible solution with conventional abutment

Core crown for Magic Abut-core

Crown with core inside was man-ufactured by casting

Placement of Crown

Post crown which was attached by dental resin to the Magic Abutcore

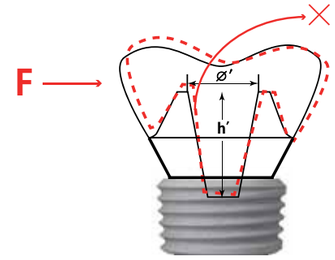
IBS implant
Innobiosurg Co.,Ltd

Failure cause of cemented type abutment with 2mm post height is taken care of

1. Prosthesis failure from vertical force (Vertical fail)
Reason: small attaching area

– Both inside and outside of abutment are double bonded.
– It prevents failure from vertical force since it can increases the cementa-tion extent not increasing the abutment post height.

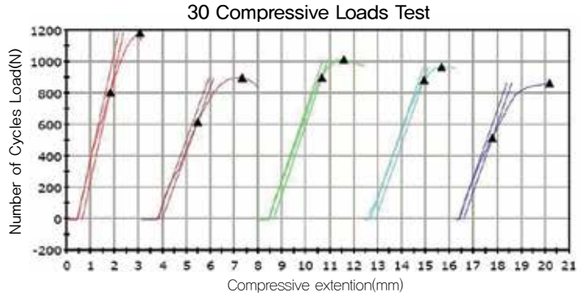
2. Prosthesis failure from horizontal force(Rotation fail)
Reason: unbalanced ratio between abutment diameter and post height



– It stops failure from rotation due to the structure of hole which carries the core from the prosthesis (h' 〉 diameter')

It minimizes screw loosening from precise work and strong material and it prevents frature

30 Compressive Loads Test



· Use of Gr 5 titanium to prevent fracture

Torque Force Test Report

Test Result					
Result	Specimen1	Specimen2	Specimen3	Specimen4	Specimen5
Maximum Torque	22.5 N · cm	24.9 N · cm	29.2 N · cm	21.7 N · cm	24.5 N · cm
Deformation, Fracture, Incomplete bond	×	×	×	×	×
Average	24.56 N · cm (SD: 2.92 N · cm, CV: 11.88 %)				
Standard of judgment	The maximum torque force should be 70% of recommended torque, more than 17.5 N · cm				
Test Record					
Torque Force	**24.56 N · cm**				

· Outstanding report compared to 17.5N which is the standard and applica-tion of solid type which shows less chance of screw loosening.

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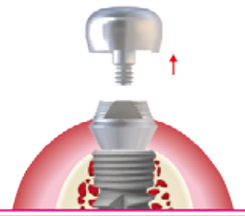
How to use Magic Abutcore

Pick-up Type (Open Tray)

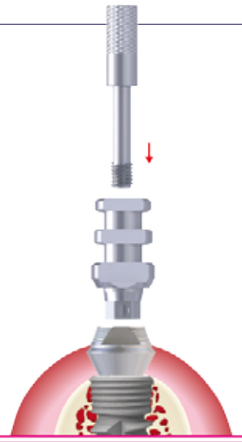
1

2



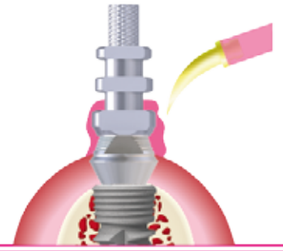
Remove healing cap after soft tissue is healed (2~3 weeks after second stage surgery)

3



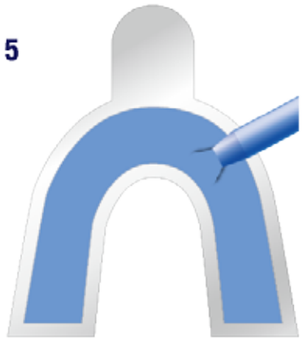
Connect the impression coping (PA) to the Magic Abutcore

4



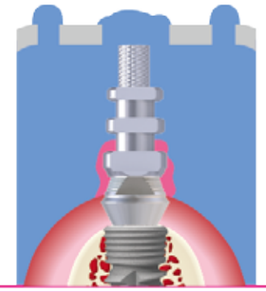
Apply impression material(light body) on gingiva and adjacent teeth

5



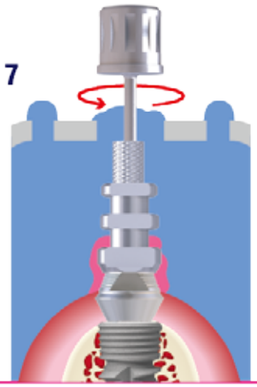
Apply impression material (heavy body) an open tray. Make sure you place the tray into patient' s oral cavity to make sure in advance

6



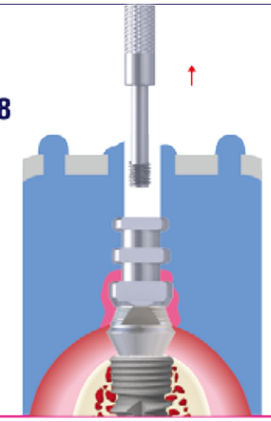
Take impression by applying cer–tain pressure on the tray around the region (pressure should be exerted from soft palate to herd palate)

7



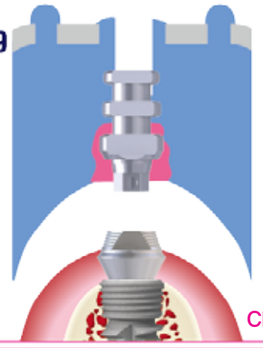
After material had hardened, loosen guide driver by using 1.2 Hexa driver

8



Remove guide driver

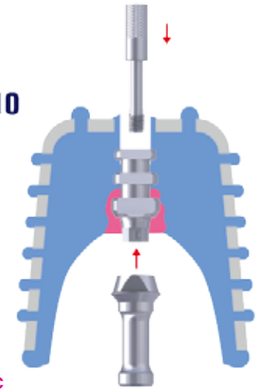
9



Remove the tray carefully

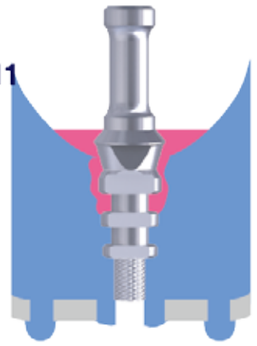
Clinic

10



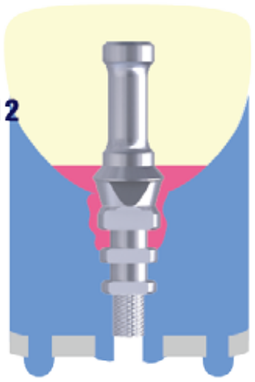
Connect the Lab analog to the abutment

11



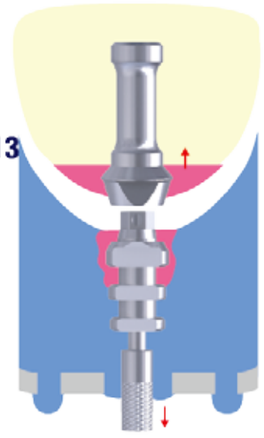
Insert it into the region of close tray. Apply separating medium on im–pression material and make artificial soft tissue by silicon(light body).

12



Pour the stone

13

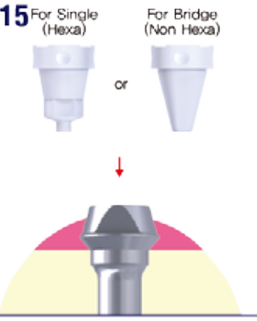


Take the tray out and then remove the impression part

14

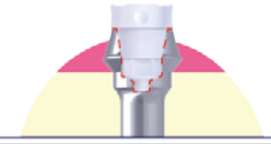
Complete working cast

15



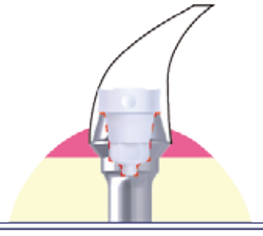
Choose laboratory plastic for core design of crown according to pro–thesis plan(single and bridge type are available)

16



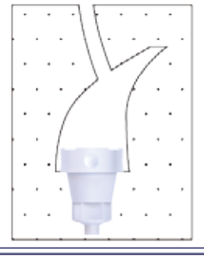
Place laboratory plastic for core design of crown

17



Wax up

18

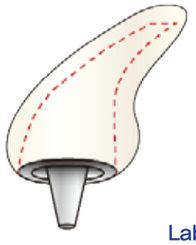


Put the waxed crown into invest–ment cast and burn it in furnace

19

Casting matal gold coping

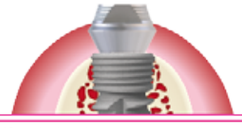
20



PEM(PEG) crown with post

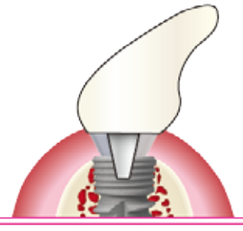
Laboratory

21



Ready to place crown on the region.

21



Final setting

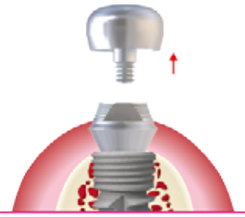
Clinic

IBS implant
Innobiosurg Co.,Ltd

How to use Magic Abutcore
Transfer Type (Close Tray)

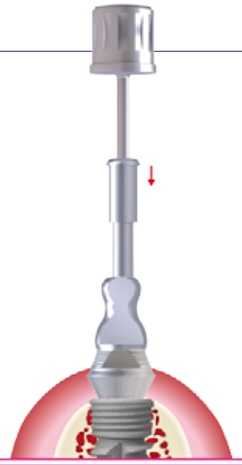
1

2



Remove healing cap after soft tissue is healed

3

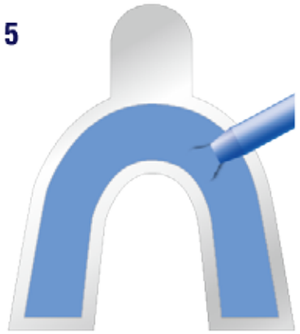


Connect impression coping(TA) to abutcore with guide driver (Use of 1.2 guide driver in Magic Kit)

4

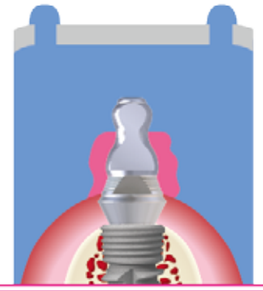
Apply impression material(light body) on gingiva and adjacent teeth

5



Apply impression material(heavy body) on open tray. Make sure you place the tray into patient' s oral cavity to make sure in advance.

6

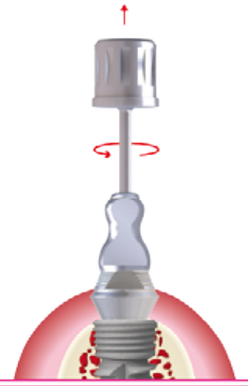


Take impression by applying cer–tain pressure on the tray around the region. Pressure should be exerted from soft palate to hard palate.

7

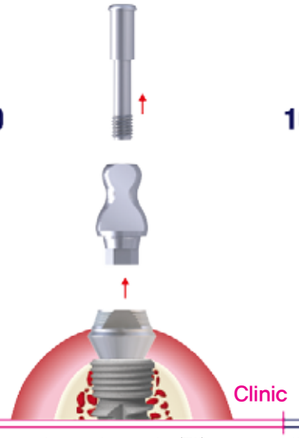
After material had harden, remove the tray carefully.

8



Unscrew the guide driver of impression coping(TA)(Use of 1.2 hexa driver in Magic Kit)

9



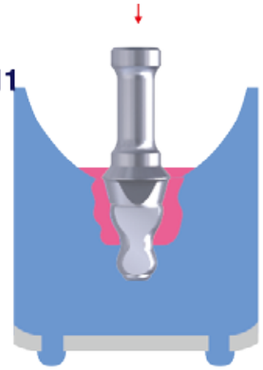
Clinic

Remove impression coping(TA) from abutcore.

10

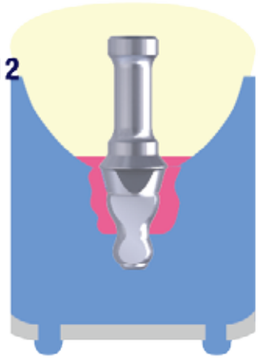
Connect impression coping(TA) to lab analog(Use of 1.2 hexa driver in Magic Kit).

11



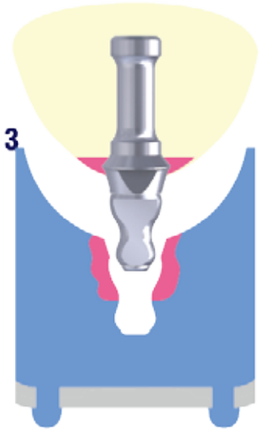
Insert it into the region of close tray. Apply separating medium on im–pression material and make artificial soft tissue by silicon(light body).

12



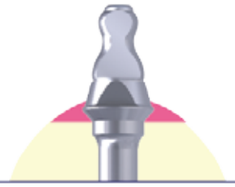
Pour the stone

13



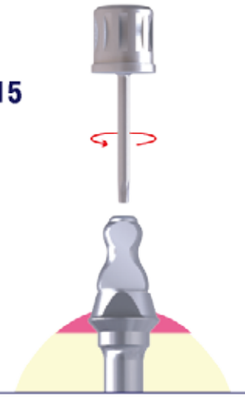
Take the tray out carefully from working cast.

14



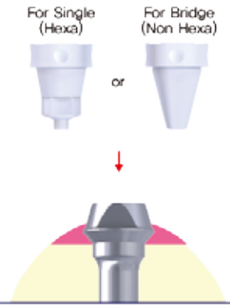
Complete working cast.

15



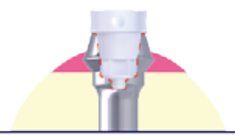
Remove impression coping(TA) from lab analog by unscrew the guide driver.(Use of 1.2 hexa driver in Magic Kit)

16



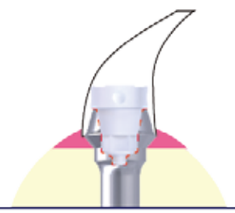
Choose laboratory plastic for core design of crown according to pro–thesis plan(single and bridge type are available)

17



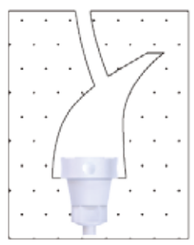
Place laboratory plastic for core design of crown

18



Wax–up

19

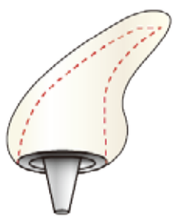


Put the waxed crown into invest–ment cast and burn it in furnace

20

Casting metal gold coping

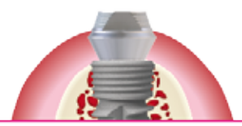
21



Laboratory

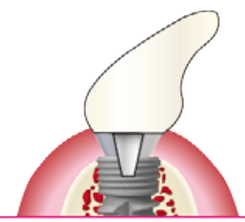
PMF(PFG) crown with post

22



Ready to place crown on the region.

23



Final setting

24

Clinic

Product

Magic Abutcore

Diameter	Cuff(mm)	Code
Solid type	1	MAC 4501S
D-Ø4.5	2	MAC 4502S
	3	MAC 4503S
	5	MAC 4505S
	7	MAC 4507S
	9	MAC 4509S
D-Ø5.5	1	MAC 5501S
	2	MAC 5502S
	3	MAC 5503S
	5	MAC 5505S
	7	MAC 5507S
	9	MAC 5509S
D-Ø6.5	1	MAC 6501S
	2	MAC 6502S
	3	MAC 6503S
	5	MAC 6505S
	7	MAC 6507S
	9	MAC 6509S

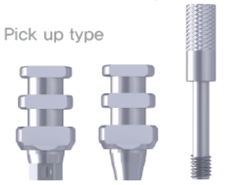
Magic Abutcore Cap

Diameter	Code
D-Ø4.5	MAC CAP4.5
D-Ø5.5	MAC CAP5.5
D-Ø6.5	MAC CAP6.5

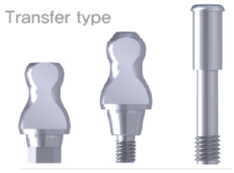
Laboratory Set

Impression Coping

Pick up type



Transfer type

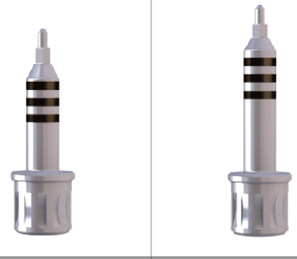


Laboratory post for core design
*It is burn out in the furnace

Lab Analog

Magic Abutcore Size	Code
Ø4.5	IBS LS4.5S
Ø5.5	IBS LS5.5S
Ø6.5	IBS LS6.5S

Magic Abutcore Driver



Short	Long
MACDS	MACDL

for Ø4.5 Magic Abutcore (Optional)

Mount Hexa Driver

Short	Long
MHDS	MHDL

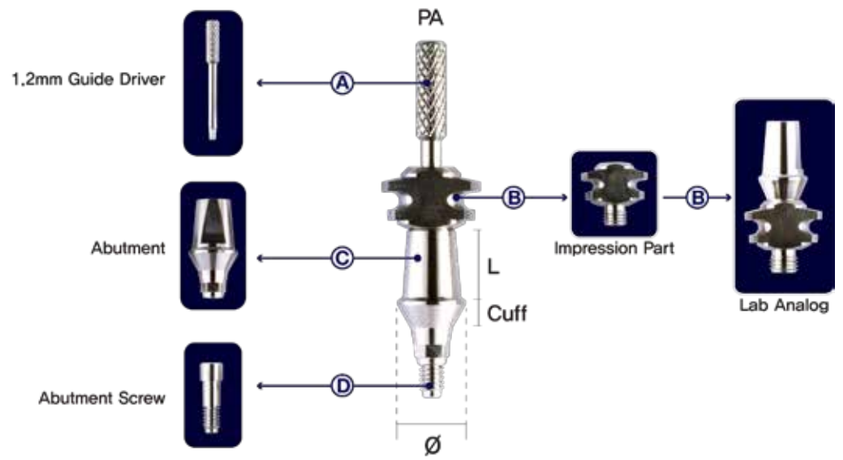
for Ø5.5 / Ø6.5 Magic Abutcore
* Magic Kit

IBS implant
Innobiosurg Co.,Ltd

Magic Abutcoping

Features

1. Simplified process and world's most precise impression
2. Convenient cuff selection according to patient's gingival condition to ensure aesthetic concerns
3. Economical as single products has 4 functions(Abutment + Lab analog + Impression coping + Prevention of screw loosening)



Ⓐ 1.2mm Hexa Guide Driver

– It acts as guide driver connected with abutment screw on impression and positioned into abutment to prevent screw loosening.

Ⓑ Impression Part

– Remove it after the impression and reuse it for Lab. Analog.

Ⓒ Abutment + Ⓓ Screw

– Pair Abutment.

MAGIC ABUTCOPING

Diameter	Length(L)		Cuff(mm)	Code			
				Pick-up Type(Open-tray Impression)		Transfer Type(Close-tray Impression)	
				4mm	6mm	4mm	6mm
D-Ø4.0	4	6	1	OSH 4014PA	OSH 4016PA	OSH 4014TA	OSH 4016TA
			2	OSH 4024PA	OSH 4026PA	OSH 4024TA	OSH 4026TA
			3	OSH 4034PA	OSH 4036PA	OSH 4034TA	OSH 4036TA
			4	OSH 4044PA	OSH 4046PA	OSH 4044TA	OSH 4046TA
D-Ø4.5			1	OSH 4514PA	OSH 4516PA	OSH 4514TA	OSH 4516TA
			2	OSH 4524PA	OSH 4526PA	OSH 4524TA	OSH 4526TA
			3	OSH 4534PA	OSH 4536PA	OSH 4534TA	OSH 4536TA
			4	OSH 4544PA	OSH 4546PA	OSH 4544TA	OSH 4546TA
D-Ø5.0			1	OSH 5014PA	OSH 5016PA	OSH 5014TA	OSH 5016TA
			2	OSH 5024PA	OSH 5026PA	OSH 5024TA	OSH 5026TA
			3	OSH 5034PA	OSH 5036PA	OSH 5034TA	OSH 5036TA
			4	OSH 5044PA	OSH 5046PA	OSH 5044TA	OSH 5046TA
D-Ø5.5			1	OSH 5514PA	OSH 5516PA	OSH 5514TA	OSH 5516TA
			2	OSH 5524PA	OSH 5526PA	OSH 5524TA	OSH 5526TA
			3	OSH 5534PA	OSH 5536PA	OSH 5534TA	OSH 5536TA
			4	OSH 5544PA	OSH 5546PA	OSH 5544TA	OSH 5546TA
D-Ø6.0			1	OSH 6014PA	OSH 6016PA	OSH 6014TA	OSH 6016TA
			2	OSH 6024PA	OSH 6026PA	OSH 6024TA	OSH 6026TA
			3	OSH 6034PA	OSH 6036PA	OSH 6034TA	OSH 6036TA
			4	OSH 6044PA	OSH 6046PA	OSH 6044TA	OSH 6046TA
D-Ø6.5			1	OSH 6514PA	OSH 6516PA	OSH 6514TA	OSH 6516TA
			2	OSH 6524PA	OSH 6526PA	OSH 6524TA	OSH 6526TA
			3	OSH 6534PA	OSH 6536PA	OSH 6534TA	OSH 6536TA
			4	OSH 6544PA	OSH 6546PA	OSH 6544TA	OSH 6546TA

How to use Magic Abutcoping

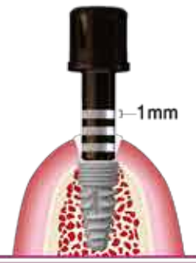
Pick-up Type (Open Tray)

1

2

Remove healing abutment after soft tissue is healed (2-3 weeks after second surgery)

3



Measure gingival thickness by using a mount driver.
Tighten the impression part counter-clock wise direction before using Magic Abutcoping

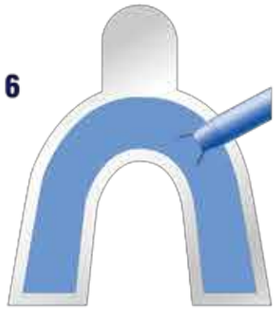
4

Choose Abutcoping cuff considering gingival thickness and attach to fixture(Vertify the connection between Abutcoping and fixture by taking X-ray)

5

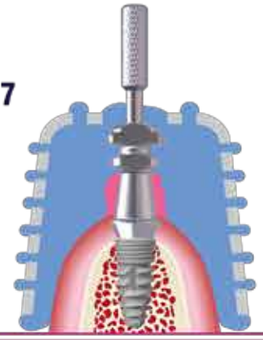
Apply impression material(light body) on gingival and adjacent teeth

6



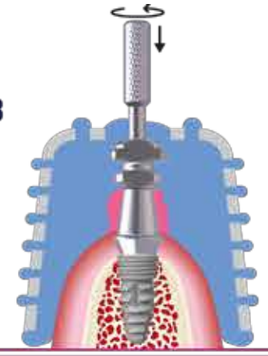
Apply impression material (heavy body) on open tray. Make sure you place the tray into patient's oral cavity to make sure in advance.

7



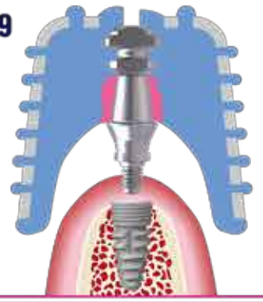
Take impression by applying certain pressure on the tray around the region. (Pressure should be exerted from soft palate to hard palate)

8



After material had hardened, loosen abutment screw by using 1.2 guide driver.
As the arrow in the figure, use 1.2 guide driver, pressing it down.
Once abutment screw is loosened completely, you can hear 'clicking' sound.

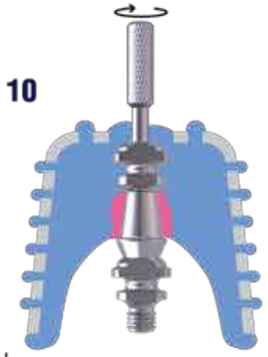
9



Clinic

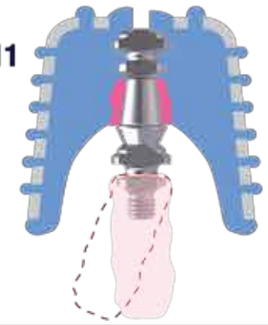
After impression material is completely hardened, remove Tray with care

10



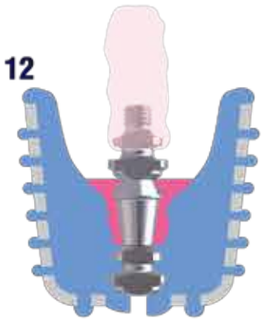
Connect impression part(the one used previously) to the abutment by using 1.2 guide driver.
Impression part can be re-used as lab analog, because it has the same inner connection as a fixture.

11



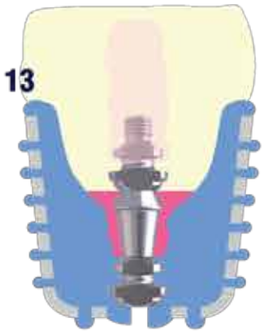
Because the length of impression part is completely short, extend its length by using laboratory resin.

12



Apply separating medium on impression material
Make artificial soft tissue by silicon

13



Pour the stone

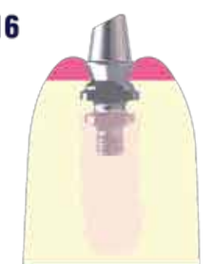
14

Take the tray out, and then remove the impression part
(Should turn clockwise to unscrew it.)

15

Complete working cast

16



Laboratory

Mill the abutment, considering crown to be made.

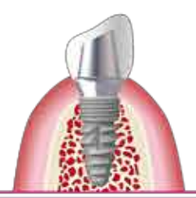
17

Crown making

18

Connect abutment

19



Clinic

Temporary crown setting (About 6 months recommended)

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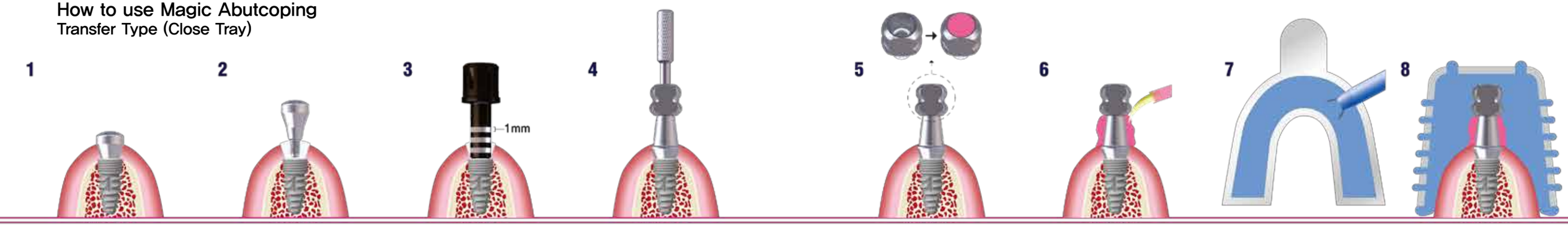
How to use Magic Abutcoping
Transfer Type (Close Tray)



Remove healing abutment after soft tissue is healed (2–3 weeks after second stage surgery)

Measure gingiva thickness by using a mount driver
Tighten the impression part counter–clock wise direction before using Magic Abutcoping

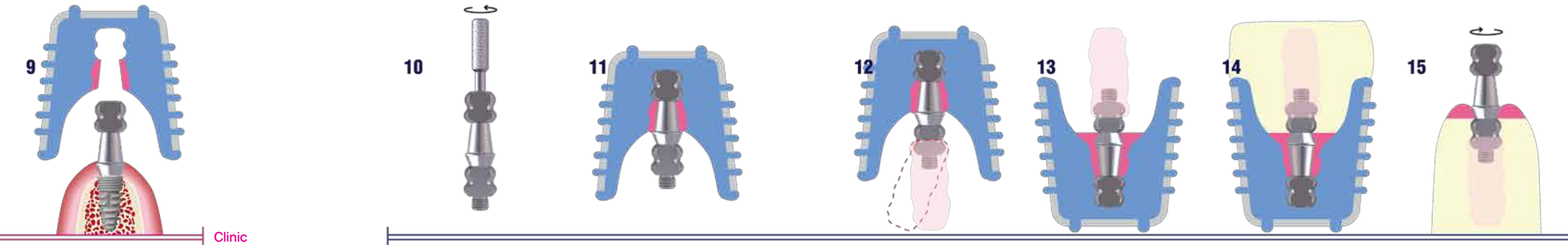
Choose Abutcoping cuff considering gingival thickness and attach to fixture
Vertify the connection between Abutcoping and fixture by taking X–ray

After removing 1.2 guide driver, fill the upper hole of impression part with wax.

Apply impression material (light body) on gingival and adjacent teeth

Apply impression material (heavy body) on open tray
Make sure you place the tray into patient's oral cavity to make sure in advance.

Take impression by applying certain pressure on the tray around the region.
Pressure should be exerted from soft palate to hard palate.



Clinic

Remove the tray carefully. After material had hardened, remove the tray from abutcoping carefully. Connect healing abutment after unscrew and remove the abutment screw.

Connect impression part(the one used previously) to the abutment by using 1.2 guide driver
Impression part can be re–used as lab analog, because it has the same inner connection as a fixture.

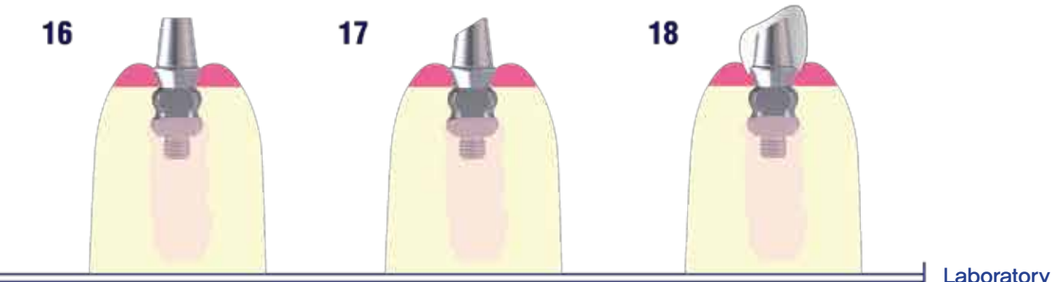
After removing 1.2 guide driver insert it into the region of close tray

Because the length of impression part is completely short, extend its length by using laboratory resin
Any shape available

Apply separating medium on impression material
Make artificial soft tissue by silicon

Pour the stone

Take the tray out, and then remove the impression part
Should turn clockwise to unscrew it

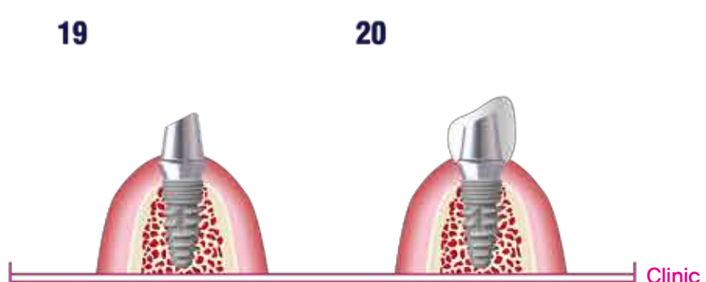


Laboratory

Complete working cast

Mill the abutment, considering the crown to be made

Crown making



Clinic

Connect abutment

Temporary crown setting
(about 6 months recommended)

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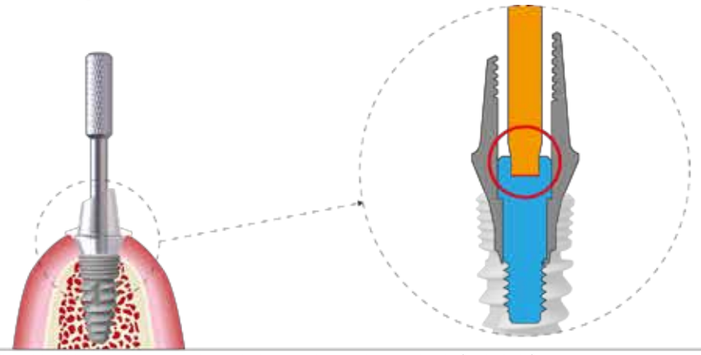
Prevention of Abutment Screw Loosening

1

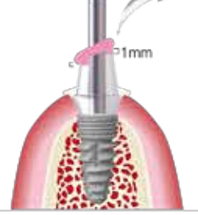
Remove temporarily attached crown and tighten abutment screw. After taking X-ray, tighten with Torque Ratchet (25~30N)

2



Connect 1.2 guide driver to abutment hexa hole and tighten it completely.(red circle)

3

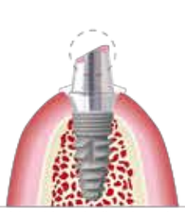


Insert resin into inner space between abutment hole and 1.2 guide driver (About 1mm depth) and then take light curing (1.2 guide driver fixed to the abutment inside)

4

Cut 1.2 guide driver to abutment level with diamond bur.

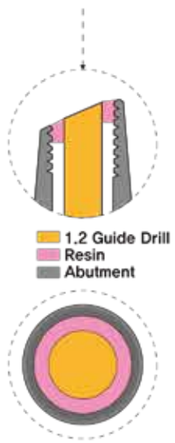
5



Milled 1.2 guide driver is fixed perfectly as it is connected to hexa hole of abutment

6

Final crown setting
Abutment screw loosening is perfectly prevented, because the milled 1.2 guide driver inside of abutment consistently presses the abutment screw.



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IBS Overdenture System

Advantages

1. Less chair time

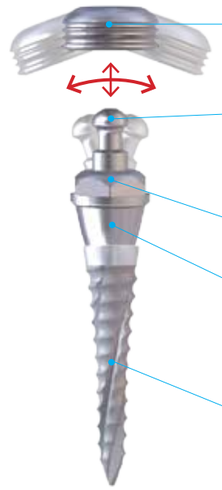
–Requiring less surgical time as only two narrow fixtures are placed with one–time drilling regardless of location, maxillary or mandibular
–Dentures attached to housings are completed at the dental lab and exclude the need to fix them separately in the clinic. Use of un–dercut retentions can obtain moderate retaining force, lengthen change periods, and shorten chair time with easy replacement.

2. Prevention of failure to retain fixtures

–The abutment does not hinder the (up and down or sliding) movement of a denture during occlusion, preventing the occlusal force to fixtures.
–Both patient and doctor know re–basing time; therefore, the re–basing done at right time will keep the fixtures free from occlusal force.

3. Correction of fixtures placed in wrong direction

– Direction can be corrected at abutments consequently, undercut retentions can be used despite errors in placement.



Magic Mushroom + N.R.Fix

Guide Housing
–When overdenture is fixed, it guides the moving abutment to be connected easily.
–Convenient procedure due to the minimized vertical height.

Moving Head
–Bite force is not conveyed to N.R. Fix since it moves as much as overdenture' s movement during mastication.(Lead to secure soft tissue supporting)
–Error of practitioners can be recovered.
–Sufficient retention force for a long time.
–Less chair time since housing does not need to be attached in clinic

Angle Cover
–It controls the degree of movement of moving head to 2.5, 5, 7.5, 10.
–Optimized movement of overdenture for all patients.

Guide Body
–Provides various cuff size(2,3,4,6,8) applicable according to the thickness of soft tissue of a patient.
–Guides Moving Head to rotate smoothly.

N.R.Fix
–If bone width is sufficient, it can be placed by only one time drilling. If bone width is less than 4mm, it can be placed easily through bone expansion (B.E.B. tech), strong self tapping and minimized bone grafting.
–Small diameter but made by titanium Gr 5 to guarantee its strength.

IBS Overdenture Experimental Report

1. Strong durability allows long term usage

Compressive Load Test (unit:N)

Product	Standard	1	2	3	4	5	Result
Abutment : MM5008 Fixture : IBS3011	more than 330	884.4	1003.0	831.5	541.2	569.3	P

* P:Pass , F:Fail , N/A:Not Applicable

A thesis entitled "Comparative Study on Masticatory Pressure of Natural Teeth and Artificial Teeth" states that the maximum shearing compressive load is 300N. The average shearing compressive load of IBS Implant' s Magic Mushroom meas–ured in 5 test results is 755N, which attests that our Magic Mushroom outlasts other competitors' overdenture products thanks to its strong durability.

2. Optimal retention force is possible

Retention test (unit:N)

Company	IBS Magic Mushroom	'O–ring' from A brand	'Locator' from B brand
Average Retention Force	7	4	9

Existing O–rings have a retaining force of 4N, which is less than what is desired, while locators has more than 9N, which causes inconvenience in mounting/dismounting. Our Magic Mushrooms are optimized to have a retaining force of 7N, which enables both appropriate retention and easy mounting/dismounting.

Specification and Selection of IBS Overdenture System

1. Selection of N.R. Fix

–Regardless of positions (maxillary or mandible), place 2 N.R. Fix that is either 11mm/13mm with 3mm diameter or 9mm/11mm/13mm with 3.5mm diameter.
–If possible, place it on the region between lateral incisor and canine.
–Check and record the posterior alveolar ridge soft tissue thickness for implantation

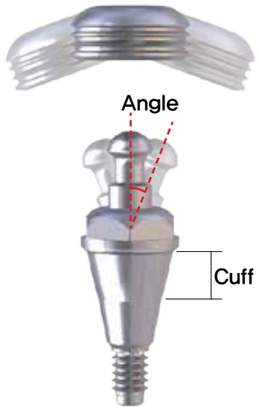
2. Selecting the degree of Magic Mushroom

※Determination of degree of moving head

The degree of moving head=Mistakenly placed fixture angle + Movement angle of overdenture resulting from soft tissue movement

※Measurement of the thickness of soft tissue should be done in alveolar ridge of the first molar region.

Thickness of soft tissue in first molar region \ Angle between 2 fixtures	Less than 5 degree	Less than 5–10 degree	Less than 10–15 degree
Less than 1mm	use of 2 Magic Mushroom (2.5 °)	use of 2 Magic Mushroom (5 °)	use of 2 Magic Mushroom (7.5 °)
Less than 1–3mm	2.5 ° , 5 °	5 ° , 7.5 °	7.5 ° ,10 °
More than 3mm	use of 2 Magic Mushroom (5 °)	use of 2 Magic Mushroom (7.5 °)	use of 2 Magic Mushroom (10 °)



MAGIC MUSHROOM

Angle	Cuff(mm)	Code
2.5	2	MM2502
	4	MM2504
	6	MM2506
	8	MM2508
5.0	2	MM5002
	4	MM5004
	6	MM5006
	8	MM5008
7.5	2	MM7502
	4	MM7504
	6	MM7506
	8	MM7508
10	2	MM1002
	4	MM1004
	6	MM1006
	8	MM1008

MAGIC MUSHROOM DRIVER

Code
MMDR

MAGIC MUSHROOM RETAINER & O-RING

Code
MMRO

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3. How to use

A. When dentures with guide housings are produced in the dental lab

① Impression

– When soft tissue is healed upon 2nd stage surgery, remove healing abutment to take fixture level impression and connect impression coping onto fixture and take X–ray to make sure of the connection.

– Select a transfer–type impression coping applicable to a ready–made tray unless an angle between two fixtures is not great.

② Producing a work model

– Engage, in the lab, with a lab analog the impression coping inside the tray where impression material has been hardened and then pour plaster and produce a work model.

③ Selection of Magic Mushroom (IMPORTANT)

– Choose a Magic Mushroom with a thickness fit for the molar gingival thickness and an inclination suited to the fixture and fix it in the model and slip a housing over it.

Thickness of soft tissue in first molar region \ Angle between 2 fixtures	Less than 5 degree	Less than 5–10 degree	Less than 10–15 degree
less than 1mm	use of 2 Magic Musroom (2.5 °)	use of 2 Magic Musroom (5 °)	use of 2 Magic Musroom (7.5 °)
less than 1~3mm	2.5 ° , 5 °	5 ° , 7.5 °	7.5 ° ,10 °
less than 3mm	use of 2 Magic Musroom (5 °)	use of 2 Magic Musroom (7.5 °)	use of 2 Magic Musroom (10 °)

④ Locking of Magic Mushroom and adjustment of the level of its head (IMPORTANT)

– Fix two Magic Mushrooms with an exclusive driver and then adjust their direction to keep them parallel (not by twisting the housing), when it should be noted that you adjust the moving heads and keep them parallel.

⑤ Fixation should be made when they stay parallel (IMPORTANT)

– Be sure to surround and fix it with tembond or lab resin after they are kept level.

⑥ Manufacture of dentures followed by conventional method

⑦ Locking of Magic Mushroom

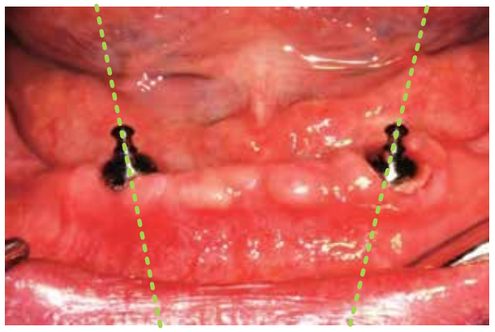
– Remove healing abutment from patient' s oral cavity and attach fixture to Magic Mushroom (25~30N)

⑧ Mounting of denture and checking of dental conditions

– Mount the denture in the mouth and check if it is fixed without movement. Any movement on the molar region indicates improper alignment of the edentulous molar area or denture base and requires re–basing in that region. At this time, the patient is required to bite the denture with very weak force.

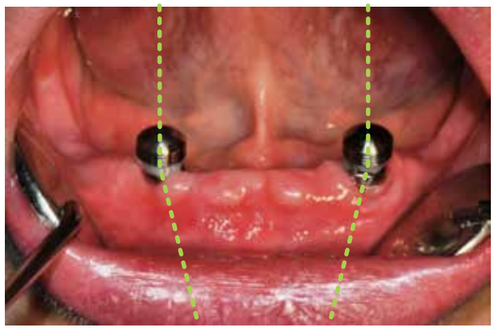
B. When housing is attached to the denture inside of the mouth in clinic

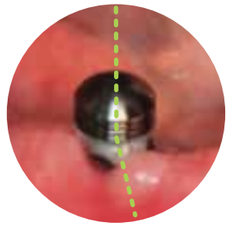
1. Connect abutment part of Magic Mushroom to N.R. Fix placed



a Confirm insertion angle of fixtures and measure thickness of soft tissue in posterior alveolar ridge
b Considering conditions including insertion angle of N.R. Fix and thickness of soft tissue in posterior, moving head with a suitable angle is connected to N.R. Fix (25~30N) after removing healing abutment.

2. Installation and fixation of guide housing





▲Fix it with flow resin as having two guide hosing stay in parallel.

Push the guide housing weakly with the Spoon Excavator to change its direction before the moving head is fixed with flow resin or tembond. Apply the same method to change the direction of the opposite guide housing to align and fix both to be in parallel with one another.

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3. Place 'Guide Housing' to overdenture

▲Overdenture with a Guide housing inside
– Resin on the guiding surface should be removed.

a Check whether the location of removed groove from already manufactured denture (the resin from the part where Guide Housing is attached is already removed) is fit to the Guide Housing which is fixed in patient's mouth.
b If the Guide housing doesn't fit into the removed groove, make the groove larger by removing additional part.
c After putting some self-cure resin to the groove inside of overdenture, place it to the patient's mouth.
d Let the patient bite strongly with both sides of the posterior overdenture touching each other.
e When resin is set, remove it from the patient's mouth(Guide Housing attached to overdenture will come out)

4. Remove resin inside of the denture

▲Complete denture in mandible

Remove the residual resin in the overdenture by using a denture bar. At this time, the resin in the tilted guiding surface of Guide Housing should be completely removed.

5. How to do 'Re-basing' inside of overdenture

a The overdenture may feel loosened when the inner phase on molar area overdenture does not fit to the shape of edentulous region. In this case, it needs 'Re-basing'. This phenomenon can occur after a certain period of time on use because of the alveolar bone resportion.
IBS overdenture system is completely different from its conventional system, so it makes patients and surgeons acknowledge right timing for Re-basing more easily. By doing so, it doesn't deliver biting force onto the fixture and placement of smaller size fixture is safe.

b When doing 'Re-basing', put the denture resin inside of overdenture and have the patient bite it weakly.

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Prosthetics System (Common Type)

- Common type prosthetics verified and used in existing implant prosthetics system
- Super-precise prosthetics manufactured by precise process, stern measurement and inspection
- Interconnection structure effectively forming abundant soft tissue
- Use of Gr5 Titanium(Ti-6A1-4V) minimizing the chance of products being fractured

Closing Screw

· Prevention of foreign substance penetrating into fixture after placement
· Tighten it by using 1.2 hexa driver and torque ratchet

Diameter	Code
D-Ø3.4	HISC00

Healing Abutment

· Forming gingiva shape after osseointegration
· Tightening it by using 1.2 hexa driver and torque ratchet

Diameter	Cuff(mm)	Code
D-Ø4.0	1	HISH 4001
	2	HISH 4002
	3	HISH 4003
	4	HISH 4004
D-Ø4.5	1	HISH 4501
	2	HISH 4502
	3	HISH 4503
	4	HISH 4504
D-Ø5.0	1	HISH 5001
	2	HISH 5002
	3	HISH 5003
	4	HISH 5004
D-Ø5.5	1	HISH 5501
	2	HISH 5502
	3	HISH 5503
	4	HISH 5504
D-Ø6.0	1	HISH 6001
	2	HISH 6002
	3	HISH 6003
	4	HISH 6004

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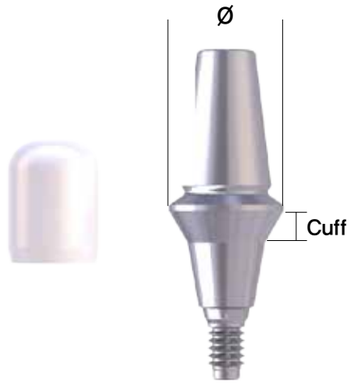
Solid Abutment

· One piece type abutment
· Protection cap and abutment included in the package
· Tighten it with solid abutment driver (25N)



Diameter	Length(L)	Cuff(mm)	Code
D-Ø4.0	4	1	HISS 4014
		2	HISS 4024
		3	HISS 4034
		4	HISS 4044
	5.5	1	HISS 4015
		2	HISS 4025
		3	HISS 4035
		4	HISS 4045
	7	1	HISS 4017
		2	HISS 4027
		3	HISS 4037
		4	HISS 4047
D-Ø5.0	4	1	HISS 5014
		2	HISS 5024
		3	HISS 5034
		4	HISS 5044
	5.5	1	HISS 5015
		2	HISS 5025
		3	HISS 5035
		4	HISS 5045
	7	1	HISS 5017
		2	HISS 5027
		3	HISS 5037
		4	HISS 5047
D-Ø6.0	4	1	HISS 6014
		2	HISS 6024
		3	HISS 6034
		4	HISS 6044
	5.5	1	HISS 6015
		2	HISS 6025
		3	HISS 6035
		4	HISS 6045
	7	1	HISS 6017
		2	HISS 6027
		3	HISS 6037
		4	HISS 6047

Solid Abutment Driver

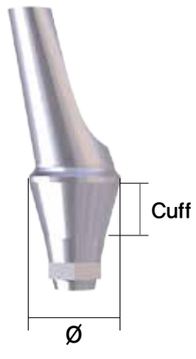
· Used to connect solid abutment

Use for Ø4.0 / 5.0 Solid Abutment	
Wide/Long	Wide/Short
SDWL	SDWS

Use for Ø6.0 Solid Abutment	
Regular/Long	Regular/Short
SDRL	SDRS

Angled Abutment

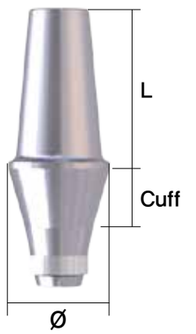
· Used to make up for the direction of the fixture placed
· Connect it using 1.2 hexa driver(25N)



Diameter	Angle	Cuff(mm)	Code	Diameter	Angle	Cuff(mm)	Code
D-Ø4.0	15°	1	HISA 40115	D-Ø5.0	15°	1	HISA 50115
		2	HISA 40215			2	HISA 50215
		3	HISA 40315			3	HISA 50315
		4	HISA 40415			4	HISA 50415
	25°	1	HISA 40125		25°	1	HISA 50125
		2	HISA 40225			2	HISA 50225
		3	HISA 40325			3	HISA 50325
		4	HISA 40425			4	HISA 50425
D-Ø4.5	15°	1	HISA 45115				
		2	HISA 45215				
		3	HISA 45315				
		4	HISA 45415				
	25°	1	HISA 45125				
		2	HISA 45225				
		3	HISA 45325				
		4	HISA 45425				

Pair Abutment

· Two piece type abutment
· Connect it using 1.2 hexa driver (25N)



Diameter	Length(L)	Cuff(mm)	Code	Diameter	Length(L)	Cuff(mm)	Code
D-Ø4.0	4	1	OSH 4014	D-Ø5.5	6	1	OSH 5516
		2	OSH 4024			2	OSH 5526
		3	OSH 4034			3	OSH 5536
		4	OSH 4044			4	OSH 5546
D-Ø4.5		1	OSH 4514	D-Ø6.0		1	OSH 6016
		2	OSH 4524			2	OSH 6026
		3	OSH 4534			3	OSH 6036
		4	OSH 4544			4	OSH 6046
D-Ø5.0		1	OSH 5014	D-Ø6.5		1	OSH 6516
		2	OSH 5024			2	OSH 6526
		3	OSH 5034			3	OSH 6536
		4	OSH 5044			4	OSH 6546
D-Ø5.5		1	OSH 5514	D-Ø4.0	8	1	OSH 4018
		2	OSH 5524			2	OSH 4028
		3	OSH 5534			3	OSH 4038
		4	OSH 5544			4	OSH 4048
D-Ø6.0		1	OSH 6014	D-Ø4.5		1	OSH 4518
		2	OSH 6024			2	OSH 4528
		3	OSH 6034			3	OSH 4538
		4	OSH 6044			4	OSH 4548
D-Ø6.5		1	OSH 6514	D-Ø5.0		1	OSH 5018
		2	OSH 6524			2	OSH 5028
		3	OSH 6534			3	OSH 5038
		4	OSH 6544			4	OSH 5048
D-Ø4.0	6	1	OSH 4016	D-Ø5.5		1	OSH 5518
		2	OSH 4026			2	OSH 5528
		3	OSH 4036			3	OSH 5538
		4	OSH 4046			4	OSH 5548
D-Ø4.5		1	OSH 4516	D-Ø6.0		1	OSH 6018
		2	OSH 4526			2	OSH 6028
		3	OSH 4536			3	OSH 6038
		4	OSH 4546			4	OSH 6048
D-Ø5.0		1	OSH 5016	D-Ø6.5		1	OSH 6518
		2	OSH 5026			2	OSH 6528
		3	OSH 5036			3	OSH 6538
		4	OSH 5046			4	OSH 6548

Lab Analog

· Used when working cast is designed.
· Same inner-connection structure as the fixure

Diameter	Code
D-Ø4.8	HIAL

Sub Hexa Impression Coping

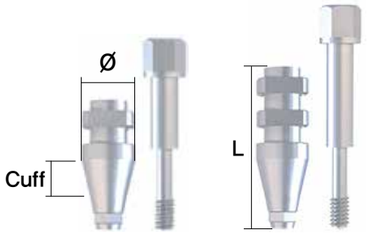
Transfer Type

· Used with close type tray when taking fixture level impression
· Tighten it by using 1.2 hexa driver and torque ratchet(10N)

Diameter	Length	Cuff	Code
D-Ø4.0	14.9(Long)	4	HICT40L
	11.9(Short)	4	HICT40S
D-Ø4.5	14.9(Long)	4	HICT45L
	11.9(Short)	4	HICT45S
D-Ø5.0	14.9(Long)	4	HICT50L
	11.9(Short)	4	HICT50S
D-Ø5.5	14.9(Long)	4	HICT55L
	11.9(Short)	4	HICT55S
D-Ø6.0	14.9(Long)	4	HICT60L
	11.9(Short)	4	HICT60S

Pick-up Type

· Used with open type tray when taking fixture level impression
· Tighten it by using 1.2 hexa driver and torque ratchet(10N)



Diameter	Length	Cuff	Code
D-Ø4.0	14.9(Long)	4	HICP40L
	11.9(Short)	4	HICP40S
D-Ø4.5	14.9(Long)	4	HICP45L
	11.9(Short)	4	HICP45S
D-Ø5.0	14.9(Long)	4	HICP50L
	11.9(Short)	4	HICP50S
D-Ø5.5	14.9(Long)	4	HICP55L
	11.9(Short)	4	HICP55S
D-Ø6.0	14.9(Long)	4	HICP60L
	11.9(Short)	4	HICP60S

Screw retained type

Sub / Screw Abutment

Diameter	Cuff(mm)	Code
D - Ø 4.5	1.5	SAH4501
	2.5	SAH4502
	3.5	SAH4503
	4.5	SAH4504
	5.5	SAH4505
	6.5	SAH4506
D - Ø 5.5	1.5	SAH5501
	2.5	SAH5502
	3.5	SAH5503
	4.5	SAH5504
	5.5	SAH5505
	6.5	SAH5506
D - Ø 6.5	1.5	SAH6501
	2.5	SAH6502
	3.5	SAH6503
	4.5	SAH6504
	5.5	SAH6505
	6.5	SAH6506

Plastic (burn out) Cylinder

Diameter	Code
D - Ø 4.5	SAC45
D - Ø 5.5	SAC55
D - Ø 6.5	SAC65

Sub / Screw Abutment Analog

Diameter	Code
D - Ø 4.5	SAA45
D - Ø 5.5	SAA55
D - Ø 6.5	SAA65

Screw Abutment Retaining Screw

Code
SARS1.8

Screw Abutment Impression Pick-Up

Diameter	Code
D - Ø 4.5	SAIP45
D - Ø 5.5	SAIP55
D - Ø 6.5	SAIP65

Screw Abutment Impression Transfer

Diameter	Code
D - Ø 4.5	SAIT45
D - Ø 5.5	SAIT55
D - Ø 6.5	SAIT65

Protect cap

Diameter	Code
D - Ø 4.5	SAPC45
D - Ø 5.5	SAPC55
D - Ø 6.5	SAPC65

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Magic Kit

- The new-concept Kit has been developed to apply three techniques of the Dual Surgical System easily and effectively

- One-time drilling system allows clinicians to form perfectly round shaped placement hole and save autogenous bone through minimized osteotomy.

- The method considering dynamic principles enables easy and safe application of the C.M.C Tech which has perfectly tackled the drawbacks of existing sinus bone grafting techniques

- A gentle tapping system, designed for the improvement of bone quality, the augmentation of bone volume, and the protection of anatomical structures, through minimal tapping

Components of Magic Kit

■ Basic Components
■ Optional Components

 Magic Split	Diameter	Code	· Tapping instrument used with a hand lever · Use for Bone quality checking as the first step of implant surgery. · For B.E.B tech, it is applied to form an initial hole before using Magic Expanders.
	Ø2.5	RS25S	
	Ø2.5	RS25L	
 Magic Expander	Diameter	Code	· Tapping instrument used with a hand lever · For soft and very soft bone quality(Q3, Q3-E, Q4) for B.E.B tech(Bone expansion) · To make bone condensation more ideal a star shape.
	Ø3.0	EX30	
	Ø4.0	EX40	
	Ø4.5	EX45	
	Ø5.0	EX50	
	Ø5.5	EX55	
	Ø6.0	EX60	
 Magic Sinus Lifter	Code		· Tapping instrument used with a hand lever · Use for C.M.C tech(Sinus lifting). · Has lateral blades and the groove(3mm depth in round blade) to grab bone block from sinus floor.
	SE		
 Bone Pusher	Code		· Tapping instrument used with a hand lever. · Use to insert grafting material into sinus area
	BP		
 Ø1.8 Guide Drill	Code		· To guide the initially-formed direction of a placement hole by Magic Split when B.E.B is performed on hard bone quality
	GD18		
 Magic Marking Drill	Code		· To mark the location for fixture to be placed
	GD4348		
	GD5358		
 Ø3.3 Magic Drill	Diameter	Code	· For hard bone quality(Q1, Q2, Q2-E) for P.B.R tech(One time drilling) · Has the groove in the middle to accommodate the removed bone core. · 50 time-use.
	Ø3.3	H1D33	
 Magic Drill	Ø3.8	H1D38	
	Ø4.3	H1D43	
	Ø4.8	H1D48	
	Ø5.3	H1D53	
	Ø5.8	H1D58	
	Ø6.3	H1D63	
 Magic Depth Drill	Code		· Has a forward-moving blade only. · To secure the accurate depth of placement hole after removing bone core. · To determine bone quality of the placement hole floor.
	BR		
 Drill Extension	Code		· To extend the application range of the drill in length
	DE		
 Drill Stopper	Size(mm)	Code	· To measure the exact range of length on drilling
	1	DS01	
	2	DS02	
	3	DS03	
	4	DS04	
	7	DS07	
	9	DS09	
	11	DS11	

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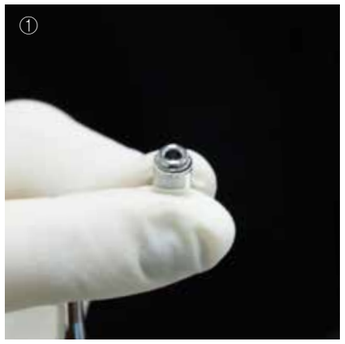
 Drill Stopper Holder & Parallel Pin	Code	· To determine the direction of a placement hole for implantation · To hold the Drill Stopper
	DSH38	
	DSH43	
	DSH48	
 Machine Hexa Driver	Code	· For the placement of implant with a hand piece. · Depth mark makes a flapless surgery convenient.
	HMD	
 Long & Short Mount Hexa Hand Driver	Code	· For the implant placement with a hand ratchet. · Depth mark makes a flapless surgery convenient.
	HRDS	
	HRDL	
 1.2 Hexa Driver	Code	· For cover screw, magic screw and abutment screw. · Could be connected to a hand ratchet.
	HD1.2S	
	HD1.2L	
 Torque Ratchet	Code	· Allows to measure exact installation torque during placement.
	TRW	
 Angled Hand Lever	Code	· For tapping instruments by having them connected to it.
	HLA	
 IBS Mallet	Code	· Tapping instrument for Bone Quality Checking, B.E.B tech, C.M.C tech. · Gentle force during tapping is required.
	HM	
 IBS Spoon Excavator	Code	· Specially designed to remove bone core, measuring depth of installation hole. · An important instrument to distinguish the bone quality
	EXC	

How to mount/dismount the handle on/from the instruments in Magic Kit

(Magic Expander, Magic Split, Sinus Lifter, Bone Pusher)



Take the angled hand lever out of the kit box and hold it. Pull the connection cover part of the body down towards the handle.

When the cover is pulled down toward the handle, insert and press a selected instrument into the connection groove. The insertion will be made softly.

Release the cover that has been held to pull it down toward the handle, while the instrument is completely placed into the connection hole, and turn the inserted instrument.

Turn the bit, and it get coupled perfectly, giving off "click" sound.

※ Keep the Magic Sinus Lifter and Magic Split in the right direction, when they are mounted into the angled hand lever.

※ Go backwards of the instruction shown above when dismounting the instrument

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DIRECTIONS for USE of MAGIC KIT

- Have know–how when placing the instrument onto a Hand Lever.
  –Do not rotate the instrument when it is placed and try to separate it with excessive force.
  If a tapping instrument is in use, always apply gentle tapping.
- When using Magic Sinus Lifter, the rounded tip blade needs to evenly be contacted to the surface of bone.
- If the sinus area is not even, make indentation first by using Magic Drill 4.8 before applying Sinus Lifter.
- Cleanse instruments immediately by cold water after usage.
  –Do not use saline solution or hydrogen peroxide.
  –Ultrasonic cleansing is recommended.
- Store instruments in dried condition after cleansing.
  –If instruments are kept in humid and high temperature condition, corrosion may occur on the surface of the instruments.

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IBS top notch quality and service has been acknowledged from all around the world