Different But, Better
Magic Surgical System

8   Magic Drill Kit
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Bone Quality Classification and Bone Quality Checking for Implant Treatment (by Dr. Wang)

**Bone Quality Classification for Implant Treatment**

- **Purpose of bone classification**
  - a. To determine the implant surgery that ensures a high success rate.
  - b. To plan a treatment for bone remodeling that ensures a high success rate.

- **Effects of bone classification**
  - c. To determine the placement hole formation method.
  - d. To be able to decide on which surgical technique is used (1-stage/2-stage surgery)
  - e. To determine the loading time.

**Bone quality classification (Dr. Wang’s method)**

**Primary diagnostic method**

- Both lateral blades of the ‘Magic Split’ should be aligned mesiodistally and entering direction of ‘Magic Split’ should be aligned with longitudinal axis of alveolar bone where implant is planned to be placed.
- **Very soft bone**: Bone condition with almost no cortical bone where ‘Magic Split’ enters by hand
- **Soft bone**: Condition of cortical bone that can be bent and expanded. Instrument enters by gentle tapping with mallet.
- **Hard bone**: Condition of cortical bone that cannot be bent. Does not enter more than 2mm by gentle tapping with mallet.

**Secondary diagnostic method**

- Use Magic Depth Drill and perform drilling as if picking on and off at the bottom of the placement hole. If the bone permits the drill to do good grinding, it is cancellous bone; otherwise cortical bone. After this procedure, scratch the wall of the hole using the spoon excavator. If bone can be felt, it indicates the presence of cancellous bone. If the drill does not scratch but enters the wall, it is due to bone marrow spaces. Classify into Q1, Q2, Q2-E, Q3, Q3-E, Q4 according to the condition of floor and wall of the placement hole.
- **Cortical bone up to bottom floor**: Q1
- **Cortical bone with normal cancellous bone**: Q2
- **Cortical bone with bone marrow space**: Q2-E
- **Thin cortical bone with normal cancellous bone**: Q3
- **Thin cortical bone with bone marrow space**: Q3-E
- **Almost zero cortical bone and little cancellous bone**: Q4
### Bone Quality Classification (Dr. Wang’s method)

<table>
<thead>
<tr>
<th>Bone Type</th>
<th>Primary bone classification</th>
<th>Secondary bone classification</th>
<th>Drill size</th>
<th>Condition of cancellous bone</th>
<th>Before implantation</th>
<th>Loading time</th>
<th>Surgical Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Magic Split enters no more than 1mm into bone.</td>
<td>No presence of cancellous bone</td>
<td>Regular cancellous bone</td>
<td>Drill 0.5–1mm deeper</td>
<td>Immediate loading possible</td>
<td>1 or 2 stage surgery</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>Magic Split enters no more than 2~3mm into bone.</td>
<td>Regular cancellous bone</td>
<td>Not required</td>
<td>Early loading possible</td>
<td>(2~3 months)</td>
<td>1 or 2 stage surgery</td>
<td></td>
</tr>
<tr>
<td>Q2-E</td>
<td>Magic Split enters no more than 2~3mm into bone.</td>
<td>Bone marrow replacement if needed</td>
<td>Bone marrow space</td>
<td>Bone marrow replacement</td>
<td>Immediate loading possible without grafting</td>
<td>1 or 2 stage surgery</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Cortical bone can be bent and expanded easily. Magic Split enters smoothly by gentle tapping</td>
<td>Regular cancellous bone</td>
<td>Place 0.5mm deeper</td>
<td>Delayed loading</td>
<td>(4~5months)</td>
<td>2-stage surgery recommended</td>
<td></td>
</tr>
<tr>
<td>Q3-E</td>
<td>Thin and porous cortical bone (less than 2mm)</td>
<td>Presence of bone marrow space or sinus case</td>
<td>Bone marrow replacement or GBR in sinus</td>
<td>More than 8 months</td>
<td>2-stage surgery required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>Almost no cortical bone</td>
<td>Thin and a small number of trabeculae</td>
<td>Bone marrow replacement with 3.8 Magic Expander (place 1mm deeper)</td>
<td>More than 8 months</td>
<td>2-stage surgery required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- In all bone qualities, the quality at the floor of the hole must be checked using the Depth Drill. If the floor is found to have hard and dense bone, 0.5 ~ 1mm of extra drill depth is needed to prevent the implant apex from hitting the floor and causing micro-fractures between the threads.
- When malleting is used to form the hole, allow for 4~5 months of healing before loading.
THREE SURGICAL TECHNIQUES (by Dr. Wang)

**P.B.R Technique**
- Check the floor and walls of the placement hole
- Perfectly round placement hole
- No drill shifting
- Minimal bone loss
- Harvestation of bone core

**B.E.B Technique**
- Bone expansion by bending of cortical bone
- Prevent bone fracture by reducing condensation force and load imposed onto bone
- Less chance of GBR procedure
- Prevents damage to anatomical structures

**C.M.C Technique**
- Minimally invasive crestal approach with ability to directly hold and control the membrane. Results in precise membrane lift exactly in the desired height, and area.
- Can be used regardless of the height of residual bone
- Minimal use of bone grafting material
Magic Surgical System

MAGIC DRILL KIT

<table>
<thead>
<tr>
<th>Magic Drill Kit</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DK</td>
</tr>
</tbody>
</table>
Components of Magic Drill Kit

- **Magic Marking Drill**
  - Code: MMD, MMDW
  - Used to mark the location for fixture to be placed

- **1.6 Lindman Drill**
  - Diameter: Ø1.6, Code: 1.6LD
  - Used to guide the initially-formed direction of a placement hole by Magic Split during B.E.B technique.

- **Magic Drill**
  - Diameter: 0.2, 0.3, 0.3, 0.4, 0.8, 0.5, 0.8
  - Code: MD28, MD33, MD38, MD43, MD48, MD53, MD58
  - Magic Drills are used in various situations including CMC, BEB, and PBR Techniques.
  - Can be used as a tissue puncher for flapless surgery.
  - Can be used for making indentations, guides, and holes as an initial step before using other instruments.
  - Used for One-Time Drilling of PBR Technique.
  - Hollow drill that enables bone harvesting.

- **Magic Depth Drill**
  - Code: MDD
  - Has a forward-moving blade only
  - Used to secure accurate depth after removing bone core
  - Used to determine bone quality of the placement hole floor

- **Drill Stopper**
  - Size (mm): 7, 9, 11
  - Code: DS07, DS09, DS11
  - Used for greater precision of drill depth

- **Wide Drill Stopper**
  - Size (mm): 7, 9, 11
  - Code: WDS07, WDS09, WDS11

- **1.2 Hexa Driver**
  - Code: HD1.2L
  - Used for cover screw, magic screw and abutment screw
  - Can be connected to a hand ratchet

- **Machine Driver**
  - Code: CHMDS
  - Used for implant placement with a hand piece
  - Depth mark makes flapless surgery convenient

- **Mount Driver**
  - Code: CMDL
  - Used for implant placement with a hand ratchet
  - Depth mark makes flapless surgery convenient

- **Torque Ratchet**
  - Code: TRW
  - Able to measure exact installation torque during placement
Magic Surgical System

**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

**Step 1. Position marking**

- Make initial indentation and mark the placement position.
  (2mm depth)

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

<table>
<thead>
<tr>
<th>Esthetic concern is required</th>
<th>Esthetic concern is not required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. 3mm between 2 fixtures</td>
<td>Min. 2mm between 2 fixtures</td>
</tr>
<tr>
<td>Min. 1.5mm between fixture and natural tooth or fixture. Buccal bone thickness of min. 2mm</td>
<td>Min. 1mm between fixture and natural tooth or fixture. Buccal bone thickness of min. 1mm</td>
</tr>
<tr>
<td>Fixture palatal bone thickness of min. 1mm</td>
<td>Fixture palatal bone thickness of min. 1mm</td>
</tr>
</tbody>
</table>

**Drill selection according to primary bone classification**

**MagiCore**
- Below Table Refers to MagiCore Placement w/ out Tapping

<table>
<thead>
<tr>
<th>MagiCore Bone Type</th>
<th>Ø 4.0mm</th>
<th>Ø 4.5mm</th>
<th>Ø 5.0mm</th>
<th>Ø 5.5mm</th>
<th>Ø 6.0mm</th>
<th>Ø 6.5mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Bone (Q3)</td>
<td></td>
<td></td>
<td>MD33</td>
<td>MD38</td>
<td>MD48</td>
<td></td>
</tr>
<tr>
<td>Hard Bone (Q2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Magic FC**

<table>
<thead>
<tr>
<th>Magic FC Bone Type</th>
<th>Ø 4.0mm</th>
<th>Ø 4.5mm</th>
<th>Ø 5.0mm</th>
<th>Ø 5.5mm</th>
<th>Ø 6.0mm</th>
<th>Ø 6.5mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Magic Surgical System

Step 2. Direction and depth of Magic Drill

- Use of Drill Stopper possible for Magic Drill
- Intermittently apply vertical do not apply up & down technique pressure during drilling (bone dancing).

Drill 3~4mm and confirm direction

Step 3. Placement hole formation and secondary bone classification

- Remove bone core using spoon excavator and check bone quality of placement hole wall
- If bone was classified as hard bone in the Primary Classification stage, use Magic Depth Drill to check floor bone.

Remove bone core by inserting Spoon Excavator into the placement hole mesio-distally as deep as the length of fixture.

Step 4. Secondary bone quality checking and precaution for drilling and fixture placement

- Enables doctors to classify bone according to the conditions of the cortical/cancellous bone around the placement hole.
- Place fixture at bone level for Q1, Q2, Q2-E, and Q3-E. For Q-3 bone, place fixture 0.5mm subcrestally.
- 2-stage surgery is required.
- Speed at 20rpm or less torque 30N/cm or less.
- For Q1 bone, drill 1mm deeper than the length of the implant in order to prevent micro-fracture of the bone in case of over-rotation of the fixture during placement.
**Magic Surgical System**

### In case of placing Magic FC4511 (Ø4.5, 11mm)

#### Hard bone

<table>
<thead>
<tr>
<th>Bone Quality</th>
<th>Loading Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Immediate loading</td>
</tr>
<tr>
<td>Q2</td>
<td>If more than 5mm cortical bone: immediate loading</td>
</tr>
<tr>
<td>Q2-E</td>
<td>If less than 5mm cortical bone: early loading</td>
</tr>
<tr>
<td></td>
<td>loading after 4~5 months</td>
</tr>
</tbody>
</table>

1. If the Magic Split enters only up to 2mm~3mm using gentle tapping with mallet, classify as hard bone.
2. Mark the placement position with Magic Marking Drill.
3. Magic Drill 4.3 up to 11 mm.
4. Remove the bone core with spoon excavator.
5. If the floor bone is cancellous bone, classify as Q2 or Q2-E.
6. Drill 0.5~1mm deeper to prevent micro-fracture.
7. Place implant.

**Check the floor bone using "Depth Drill"**

1. If the Magic Split enters only up to 2mm~3mm using gentle tapping with mallet, classify as hard bone.
2. Mark the placement position with Magic Marking Drill.
3. Magic Drill 4.3 up to 11 mm.
4. Remove the bone core with spoon excavator.
5. If the floor bone is cancellous bone, classify as Q2 or Q2-E.
6. Drill 0.5~1mm deeper to prevent micro-fracture.
7. Place implant.

**Check the floor bone using "Depth Drill"**

1. If the Magic Split enters only up to 2mm~3mm using gentle tapping with mallet, classify as hard bone.
2. Mark the placement position with Magic Marking Drill.
3. Magic Drill 4.3 up to 11 mm.
4. Remove the bone core with spoon excavator.
5. If the floor bone is cancellous bone, classify as Q2 or Q2-E.
6. Drill 0.5~1mm deeper to prevent micro-fracture.
7. Place implant.

**Check the floor bone using "Depth Drill"**

1. If the Magic Split enters only up to 2mm~3mm using gentle tapping with mallet, classify as hard bone.
2. Mark the placement position with Magic Marking Drill.
3. Magic Drill 4.3 up to 11 mm.
4. Remove the bone core with spoon excavator.
5. If the floor bone is cancellous bone, classify as Q2 or Q2-E.
6. Drill 0.5~1mm deeper to prevent micro-fracture.
7. Place implant.

**Check the floor bone using "Depth Drill"**
**Soft bone**

<table>
<thead>
<tr>
<th>Bone Quality</th>
<th>Loading Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3</td>
<td>loading after 4~5 months</td>
</tr>
<tr>
<td>Q3-E</td>
<td>loading after 8 months</td>
</tr>
</tbody>
</table>

1. If Magic Split enters smoothly more than 3mm with gentle tapping, classify as Q3 or Q3-E.
2. Mark the placement position with Magic Marking Drill.
3. Magic Drill 3.8 up to 11 mm.
4. Remove the bone core with spoon excavator.
5. If bone cannot be felt, it indicates bone marrow space, and Q3-E bone. Remove bone marrow tissue with spoon excavator and perform bone marrow replacement.
6. Place implant.

5. Use Depth Drill or spoon excavator to scratch the walls of the placement hole. If bone can be felt, classify as Q3.

6. Place implant 0.5mm deeper.
Magic Surgical System

MAGIC SINUS & EXPANSION KIT

Magic Sinus & Expansion Kit

Code

SEK
Components of Magic Sinus & Expansion Kit

- **Magic Split**
  - Diameter: Ø2.5
  - Code: MS25S

- **1.6 Lindman Drill**
  - Diameter: Ø1.6
  - Code: 1.6LD

- **Magic Expander**
  - Diameter: Ø3.8
  - Code: ME38
  - Ø4.3
  - Code: ME43
  - Ø4.8
  - Code: ME48
  - Ø5.3
  - Code: ME53
  - Ø5.8
  - Code: ME58

- **Magic Marking Drill**
  - **Code**
    - MMD
    - MMDW

- **Magic Short Drill**
  - **Code**
    - MSD

- **Magic Sinus Lifter**
  - **Code**
    - MSL

- **Bone Pusher**
  - **Code**
    - BP

- **Short Drill Stopper**
  - **Size(mm) Code**
    - 1 SDS01
    - 2 SDS02
    - 3 SDS03
    - 4 SDS04

- **Angled Hand Lever**
  - **Code**
    - HLA

**Custom Order**

- Tapping instrument used with hand lever
- Used for Bone quality checking as the first step of implant surgery
- Used for B.E.B. tech, it is applied to form initial hole before using Magic Expanders

- Used to guide the initially-formed direction of a placement hole by Magic Split when B.E.B is performed on hard bone quality

- Tapping instrument used with hand lever
- Used for soft and very soft bone quality (Q3, Q3-E, Q4) and for B.E.B. tech (Bone expansion)
- Patented, star-shaped tool to reduce bone condensation and load

- Used to mark the location for fixture to be placed

- Used to prepare the placement hole in the posterior area with limited space
- Used to drill up to 2mm from the sinus floor prior to applying C.M.C Technique

- Tapping instrument used with hand lever
- Use for C.M.C tech (sinus lifting)
- Has lateral blades for controlled lifting action and a 3mm empty space for offset-loading effect and control of bone block.

- Tapping instrument used with hand lever
- Use to insert grafting material into sinus area

- Used for greater precision of drilling depth

- Used for tapping instruments
Magic Surgical System

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

- **Indication**
  - Case1. Placement hole formation in Q4 bone
  - Case2. Bone Expansion
  - Case3. Protection of anatomical structure

- **Features**
  - 1. Developed with structural considerations and mechanical analysis of alveolar bone
  - 2. May effectively minimize the need for GBR
  - 3. Avoids damage to anatomical structures

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**Indication 1.** Fixture placement in Q4 bone

- Methods to secure initial stability should be considered. Formation of bone tissue is necessary and should be considered for fixture to endure occlusal force.

- If the Magic Expander is not driven to the ideal depth with manual force during bone grafting, use tapping instrument with very gentle tapping

1. **Initial hole formation**
   - (use of Magic Split)
   - Form the initial hole by applying Magic Split 1mm deeper than the length of the 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 3.8)

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

4. **Fixture placement (One size bigger fixture - 4.3)**

   - Apply Magic Expander 1mm deeper than the length of fixture. When this procedure is repeated 2-3 times, bone grafting material would be sufficiently grafted inside of bone marrow space.
Indication 2. Bone expansion

- If the tapping instrument does not advance, mesial and distal portions of cortical bone must be removed in order to allow the cortical bone to be bent when Expander is applied. After removal of the mesiodistal bone, resume gentle tapping with the Expander. If the Expander still does not advance further into desired depth, use the 1.6 Guide Drill to slightly remove small portions of the buccal-lingual cortical bone in order to make it thinner for bending. Once the buccal-lingual bone is made thinner, apply very gentle tapping to bend and expand the bone.

1. Drill 1mm deeper than the pre-determined implant using the 1.6 Guide Drill. Make an initial hole for the Magic Split.

2. Insert the Magic Split to the length of the implant by gentle tapping. Bone Expansion takes place upon gentle tapping. Cortical bone is split mesio-distally.

3. Use the 1.6 Guide Drill and remove a portion of the mesiodistal cortical bone and form an oval-shaped placement hole.

4. Insert Magic Expander 3.8 to the length of implant. Apply gentle tapping only.

5. Use the 1.6 Guide Drill to remove a portion of the mesiodistal cortical bone.

6. Insert Magic Expander 4.3 with gentle tapping to the length of implant.

7. Place Ø4.5 fixture 0.5mm below bone level. If there is a fracture line, perform bone grafting and suture.
## Magic Surgical System

### Indication 3. Protection of anatomical structure

- Instrument does not directly come in contact with anatomical structures. Mechanical and biological logic ensures protection of structures from damage.

  a. Sinus augmentation up to 4mm

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apply Magic Marking Drill and mark implantation position.</td>
</tr>
<tr>
<td>2</td>
<td>Drill up to 1mm from the sinus floor using Magic Drill 4.8</td>
</tr>
<tr>
<td>3</td>
<td>Move 1~2mm into sinus floor using Magic Expander 3.8</td>
</tr>
<tr>
<td>4</td>
<td>Move 2~3mm into the maxillary sinus using the Magic Expander 4.3</td>
</tr>
<tr>
<td>5</td>
<td>Move 3~4mm into the maxillary sinus using the Magic Expander 4.8</td>
</tr>
<tr>
<td>6</td>
<td>Implant Ø5.0, 11mm is placed.</td>
</tr>
</tbody>
</table>

### b. Prevention of Damage to Inferior Alveolar Nerve

- Minimize infiltration anesthesia on soft tissue.
- Let the patient raise left hand when they feel pain during surgery, then the doctor should remove the instrument, change its direction and resume treatment.
- CT scan is recommended in order to precisely locate the inferior alveolar nerve before procedure.

1. Mark placement position with the Magic Marking Drill.
2. Use the Magic Drill keeping a minimum 1mm distance from the inferior alveolar nerve at all times.
3. Insert Magic Expander with gentle tapping. Must be gentle tapping and if more force is required, stop tapping and remove a portion of the mesio -distal and buccal bone. Resume tapping. If the patient feels pain, stop tapping and change the direction towards the buccal direction. Resume tapping as necessary.
4. Give a bit of pressure lingually when placing the implant. The inferior alveolar nerve may be compressed but will not contact the fixture directly and it will not suffer damage.
**Precautions for BEB tech**

1. **2-stage surgery must be performed.**
   - Initial stability decreases due to bone resorption from the inside of placement hole.

2. **Give at least 5 months for bone healing. Early loading is not recommended.**
   - Give sufficient amount of bone healing time as bone resorption area of inside of placement hole is large.

3. **Check for any fractures and use bone grafting material in the case of fracture.**
   - Give some space for cortical bone healing.

4. **Only use wrist action when using hand mallet. (soft tapping).**
   - Strong strikes will lead to excessive loading that may cause bone fracture.
Magic Surgical System

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

- **Indication:** GBR is needed in sinus area and Sinus Lift of more than 4mm is required
- **Features:**
  1. Technique was developed using sound biological and mechanical as well as physical logic which ensures safe, precise, and consistent sinus lifting.
  2. Application of GBR with 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
  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 residual bone.
- **Precautions:**
  1. Tapping force must be gentle
  2. If instrument does not advance, drill must be used to remove a portion of bone
  3. When the instrument advances into the maxillary sinus, proceed slowly while further advancing (very slowly) until the membrane is elevated to the desired height.

### Step 1. CMC Tech Preparation Stage

1. **Magic Marking Drill**
   In case of residual bone height less than 2mm, skip this step and apply Magic Sinus Lifter without using Marking Drill.

2. **Use of Magic Drill 4.8 or 4.3**
   Use of Magic Drill 4.8 or 4.3 up to 2mm below the sinus floor.

3. **Use of Spoon Excavator**
   Use the Excavator to remove the bone core (where Magic Drill was used) and measure the depth of the hole.

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

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

5. **Fractured bone block bigger than diameter of Sinus Lifter**
   The outer bevel shape of the Sinus Lifter creates a bone block that is circumferentially larger than the apex of the instrument, ensuring that the instrument does not come into contact with the membrane.

6. **Sinus membrane detached**
   Care should be taken to advance the instrument very slowly into the maxillary sinus in order to adjust elevating force. The 3mm empty space of the apex of the lifter enables direct control of the bone-block and consequently the membrane, which is connected to the bone-block.
**Step 3. Bone Grafting and Placement Stage**

1. Remove the Sinus Lifter, slightly moving it mesiodistally. Place bone grafting material of 0.04 – 0.05cc per mm of membrane lift.

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

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**In the event that instrument does not advance into the bone**

* Reason: Presence of hard cortical bone on the sinus floor

* Solution: Make 0.5~1mm additional indentation.

1. Place a stopper onto the drill and make an indentation of 0.5mm to 1mm more.

2. Insert the Sinus Lifter into the newly prepared space and perform gentle tapping.

3. If this method is not successful, repeat step 1.
Magic Surgical System

Application of C.M.C Tech at area of inclined bone

The direction of sinus lifting should be in line with the direction which GBR is to be performed. Conversely, the implant placement direction could be different than the sinus lifting direction according to the diagnosis and surgical plan determined by the surgeon.

1. Insert a cut ‘Endo file’ (about 4mm) into the placement area and take X-ray to check for relationship between the inclination and the placement location (IMPORTANT).

2. Perform drilling from the placement location towards the direction of less inclination up to 2mm below the sinus floor.

3. Insert Sinus lifter up to the length of the implant to be placed.

4. Remove the ‘Sinus Lifter’ and do GBR.

5. Perform drilling after GBR procedure in the direction of the planned fixture placement.

6. Place fixture.
Application of C.M.C Tech at area with thick mucosa

(mucocele)

1. Insert a cut ‘Endo file’ (about 4mm) into the placement area and take X-ray to check for a relationship between the inclination and the placement location (IMPORTANT).

2. Perform drilling from the location of placement up to 2mm below the sinus floor.

3. Advance the ‘Sinus Lifter’ about 2~3mm to separate the periosteum at the bottom of the mucocele.

4. Secure space by inserting bone grafting material (0.08-0.1cc/mm).

5. Place fixture.

When there is mucosa at location to be placed.
Magic Surgical System

Surgical components not included in the Kits (available separately)

**IBS Mallet**
- Tapping instrument for Bone Quality Checking, B.E.B tech, C.M.C tech
- Gentle force during tapping is required

**IBS Spoon Excavator**
- Specially designed to remove bone core
- Marked for measuring depth of placement hole
- An important instrument to distinguish bone quality

**Drill Extension**
- Used to extend the application range of the drill in length

**Drill Stopper**
- Used for greater precision of drill depth

**Machine Hex Driver**
- Used for the placement of implant with a hand piece
- Depth markings make flapless surgery convenient

**1.2 Hex Driver**
- Used for cover screw, magic screw and abutment screw
- Can be connected to hand ratchet

**Ultra Short 1.2 Hex Driver**
- Used for removing coping pin during impression taking

**Bone Remover**
- Used to remove bone core from the center of Magic Drill. Sharp tip and curved structure allows for easy and safe removal of bone core. Fits all sizes.

**Parallel Pin**
- Parallel pins are provided in the surgical kit to aid the surgeon in the alignment of implants during placement.
- The pins are double sided with different diameters on each side.

**1.6 Lindemann Drill**
- Used to guide the initially-formed direction of a placement hole by Magic Split when B.E.B is performed on hard bone quality
Magic Guide Kit

<table>
<thead>
<tr>
<th>Code</th>
<th>GK</th>
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</table>

Surgical components not included in the Kits (available separately)

- Used for removing coping pin during impression taking
- Used to guide the initially-formed direction of a placement hole by Magic Split when B.E.B is performed on hard bone quality
Components of Magic Guide Kit  

- **Pin Drill**  
  - Used to form hole for Guide Pin to enter the bone

<table>
<thead>
<tr>
<th>Pin Drill</th>
<th>Code</th>
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<td>GDL</td>
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- **Guide Pin (Short)**  
  - Allows to have exact position and placement direction after using a Guide Drill
  - Check placement direction by taking CT scan
  - Serves as landmark in flapless surgery

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Ø3.3</td>
<td>P33S</td>
</tr>
<tr>
<td>Ø3.8</td>
<td>P38S</td>
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<tr>
<td>Ø4.3</td>
<td>P43S</td>
</tr>
<tr>
<td>Ø4.8</td>
<td>P48S</td>
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<tr>
<td>Ø5.3</td>
<td>P53S</td>
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- **Guid Pin (Long)**

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<td>Ø3.8</td>
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<td>P43L</td>
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<tr>
<td>Ø4.8</td>
<td>P48L</td>
</tr>
<tr>
<td>Ø5.3</td>
<td>P53L</td>
</tr>
</tbody>
</table>

- **Magic Expander**  
  - Magic Drills are used in various situations including CMC, BEB, and PBR Techniques.
  - Can be used as a tissue puncher for flapless surgery.
  - Can be used for making indentations, guides, and holes as an initial step before using other instruments.
  - Used for One-Time Drilling of PBR Technique.
  - Hollow drill that enables bone harvesting.

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<td>MD48</td>
</tr>
<tr>
<td>Ø5.3</td>
<td>MD53</td>
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</tbody>
</table>

- **Periosteum Lifter**  
  - Instrument for periosteum lifting during internal pocket technique

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- **Angled Hand Lever**  
  - Used for tapping instruments

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<td>HLA</td>
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</table>
**C.P.C TECHNIQUE** *(Crestal approach with Periosteum Control)*

**- Internal Pocket Tech**

1. Make a mark on the soft tissue for of placement site.

2. Perform drilling up to a depth of 5mm in the direction of planned fixture placement.

3. A 5mm hole is formed by the Pin Drill.

4. Select guide pin that matches the magic drill suitable for the diameter of the fixture to be placed.
   Place the guide pin in the hole formed by the Pin Drill and take CT scans.

5. Use Magic Drill that matches the Guide Pin that was placed.

6. Perform drilling until cortical bone is reached.
Fracture the surrounding bone of the hole using the Periosteum Lifter and detach the periosteum from the alveolar ridge.

Perform GBR procedure

Perform drilling & place MAGICORE fixture.
Open the sterile casing by removing the seal. The fixture capsule is enclosed inside a sterile casing as shown above.

Magicore fixture packaging is shown above. The fixture diameter and length as well as other dimensions are marked on the side of the box.

Press down on the top edge of the box, marked “OPEN” with thumb to break the seal and open the box.

The fixture capsule is enclosed inside a sterile casing as shown above.

Open the sterile casing by removing the seal.

Squeeze the part of the capsule with thumb pressure to open the capsule.

Press down on the bottom part of the capsule with thumb to open the capsule.
Connect Machine Driver to fixture. Make sure the Machine Driver is securely engaged, tilt towards the front window to snap off, and disengage the fixture from the mount.

Take out the fixture from the capsule.

Remove silicon portion from the capsule. A closing screw is included within the silicon.

After placement, engage the 1.2 hexa driver with the closing screw.

Remove closing Screw from the silicon and connect it onto the fixture.
To mount a tapping instrument onto the Angled Hand Lever, pull back the connection lock down towards the handle as shown above.

Release the connection lock. Hold and turn the instrument as shown above until it clicks, confirming that the instrument is completely engaged onto the connection lock.

While the connection lock is pulled down toward the handle, insert selected instrument into the connection groove.

Make sure that the connection lock is returned back to its original position.

To dismount instrument from hand lever, pull back the connection lock and pull out the instrument from the connection groove.
Global Network

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