Guided kit for conical connection implant procedure

C1 & V3 Conical connection implant

REAL TIME Restoration

Guided Conical drill

Multi-Unit abutment, Conical connection

REAL TIME Guided Template
**Color Coding Guide**

- **Narrow** → Ø3.30
- **Standard** → Ø3.75/3.90
- **Standard** → Ø4.20/4.30
- **Wide** → Ø5

**Laser Marks**

11-3-43

**Drill Labeling**

11 - 3 - 43

- Implant Length
- Multi-Unit Height
- Diameter Color Coding
Example 1

**Soft** Bone Implant Ø4.20/4.30 L11.5 with M.U. H=3;

Example 2

**Hard** Bone Implant Ø4.20/4.30 L11.5 with M.U. H=3;
Pre-Surgical Steps

1. The package includes:
   - A surgical template
   - Final drills
   - Multi-Unit abutments
   - Implants
   - Restoration
   - Documentation
     (Including information specific to each planned implant)

2. Verification
   Prior to surgery, verify that you have all necessary components.

Initial try-in
   It is essential to try-in the template in the patient’s mouth, prior to surgery. Correct seating and stability of the template must be confirmed.

- Ensure that guide, plan and documentation are all made according to the specifications.
- In rare cases, minor adjustments may be required.
The REAL TIME template is shipped non-sterile. Therefore, it must undergo disinfection prior to use.

Recommended protocol: completely immerse in a 0.2% Chlorhexidine solution for 10 minutes at room temperature prior to surgery.

Caution! Do not autoclave.
General

- All REAL TIME drills and instruments are for use ONLY with the REAL TIME surgical template.
- Inspect all instruments prior to each surgery and replace if broken or dull.
- Ensure cooling of cutting instruments with sterile saline solution.
- Replace cutting instruments after 30 uses.
- Implants should be loaded only if significant primary stability is achieved.
- Guided conical drills should be used for a single surgery, do not autoclave single use drills!

Handling

- Hold the template firmly while drilling.
- Avoid any lateral pressure on the instruments, as it may result in a shift in template position, detachment of the template or damage to instruments.
- Use an ‘in-out’ motion while drilling, slowly inserting the drill until the built-in stopper touches the top part of the template.
- Do not over-tighten implant insertion tools. It may result in a shift in template position or damage to the template.
- Make sure that the cross pin is fully inserted into the template and insertion tool.
Drills and tools MUST engage the template before turning is started.
Built-in stopper and centering mechanism: All REAL TIME drills are designed to engage a guide template for correct function. Drills and tools MUST engage the template before turning is started. Follow drill sequence based on the planned diameter and length of each implant, Multi-Unit abutment height and bone type. Sequence is demonstrated using a 11.5mm C1 implant with Multi-Unit H3:

<table>
<thead>
<tr>
<th>Bone Type</th>
<th>Implant Ø</th>
<th>Ø3.30</th>
<th>Ø3.75/3.90</th>
<th>Ø4.20/4.30</th>
<th>Ø5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Bone</td>
<td>Ø3.30</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td>Ø3.75/3.90</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td>Ø4.20/4.30</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td>Ø5</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td>Hard Bone</td>
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<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

Key to codes use:
- ⬤ Bone Mill Ø5.0mm
- ⬤ Guided Starter drill Ø2.40mm
- ⬤ Guided Pilot drill Ø2.40mm x 11+3mm
- ⬤ Guided Conical drill Ø3.30mm x 11+3mm
- ⬤ Guided Conical drill Ø3.90mm x 11+3mm
- ⬤ Guided Conical drill Ø4.30mm x 11+3mm
- ⬤ Guided Conical drill Ø5mm x 11+3mm

All drills are laser marked to ensure the correct drill length is used.
- Do not use the last drill for Soft bone (type 3&4).
- The drilling sequence is demonstrated using an 11.5mm C1 implant with Multi-Unit H3.
- Procedure recommended by MIS cannot replace the judgment and professional experience of the surgeon.
- Multi-Unit abutment should be torqued to a min. 20Ncm during surgery (30Ncm after implant have osseointegrated).

### Drilling Sequence

<table>
<thead>
<tr>
<th>Ø3.30mm</th>
<th>Soft (type 3&amp;4)</th>
<th>Hard (type 1&amp;2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Speed (RPM)</td>
<td>200-400</td>
<td>200-400</td>
</tr>
<tr>
<td>Diameter</td>
<td>Ø5.0</td>
<td>Ø2.40</td>
</tr>
<tr>
<td>MG1-BM048 Bone Mill</td>
<td>MG1-D06024 Starter Drill</td>
<td></td>
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### Guided Template

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**Ø3.75 / Ø3.90mm**

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<th>Ø5.0</th>
<th>Ø2.40</th>
<th>Ø2.40</th>
<th>Ø2.30</th>
<th>Ø2.90</th>
<th>Ø3.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>200-400</td>
<td>200-400</td>
<td>400-600</td>
<td>200-400</td>
<td>200-400</td>
<td>15-25</td>
</tr>
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<td><strong>MG1-D06024</strong> Starter Drill</td>
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Ø4.20 / Ø4.30mm

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<th>Ø5.0</th>
<th>Ø2.40</th>
<th>Ø2.40</th>
<th>Ø2.30</th>
<th>Ø2.90</th>
<th>Ø3.40</th>
<th>Ø4.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>200-400</td>
<td>200-400</td>
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Bone Mill

The bone mill is designed to flatten the alveolar ridge, when needed, prior to drilling. It enables better drilling accuracy in sharp alveolar ridges. In addition it allows an easy path of insertion for the Multi-Unit abutment.

Laser Marks

Bone mill tool has built-in laser marks for depth control. Each line represents a Multi-Unit height. (For Multi-Unit abutment H=1mm, drill until the middle of the first line).

Use of a bone mill should be part of the planning stage.
Starter Drill

The starter drill MG1-D06024 is the first drill in the procedure and has two main functions:

• Creating a centered hole for subsequent drills.
• Determining the bone density.

Use of a bone mill should be part of the planning stage.

Pilot Drill

The pilot drill is the second drill used in the procedure. The main function is to deepen the osteotomy to the correct depth.
Conical Drills

The conical drill is intended for a single use. The drill is clearly labeled with implant length, drill diameter and Multi-Unit height. The drill itself is laser marked in order to ensure that the correct drill is used. Each drill is double packed and sterile.

Guided conical drills should be used for a single surgery. DO NOT autoclave conical drills!
Assembly of Multi-Unit to Insertion Tool

The Direct Insertion Tool MG1-INSR1, is used to secure the template into the placed implant. After removal of the Multi-Unit grip handle, connect the designated insertion tool to the Multi-Unit abutment, tighten by hand.

Assembly of Insertion Tool to Implant

The Direct Insertion Tool should be attached to the implant manually prior to implant placement. Open implant inner tube and screw the mounted insertion tool (attached to the Multi-Unit) into the implant, tighten by hand.

Multi-Unit abutments are double packed and sterile.
Implant Insertion

Insert the implant through the template using the assembled direct insertion tool. Insert the insertion tool with a torque ratchet until stopper reaches the template. Abutment will tighten to the desired torque during implant insertion.

Inserting the Cross Pin

Secure the template to the insertion tool using the cross pin. It should remain connected to the implant until the implant placement procedure has been completed.

- Do not exceed insertion torque of 75 Ncm. Use the torque ratchet to control torque level.
- Rinse the template and cross pin hole before implant and pin insertion.
After implant placement procedure has been completed, remove the insertion tool by removing its internal screw. Then remove the template, together with all the insertion tools and cross pins.

In cases of:
- Non parallel implants.
- Insertion path deviation between template and implants.
First remove the fixation pins and insertion tools, then remove the template.

If clamping occurs between insertion tool and Multi-Unit, release by gently applying reverse torque to the insertion tool.
Multi-Unit Abutments

Restoration is based on straight Multi-Unit abutments according to plan.

Restoration Fitting

Insert the restoration into patient’s mouth and ensure that fitting to the Multi-Unit abutments, contact points and occlusion is achieved.

- REAL TIME supports straight Multi-Unit abutments up to gingival height of 3mm.
- In rare cases, minor adjustments may be required.
Final Adjustments

If required, make minor adjustments, examine the finished restoration in patient’s mouth and verify occlusion again.

Screw Tightening

Tighten the restoration screws to the Multi-Unit abutments. Use maximum torque of 20-25 Ncm.
Final Restoration

Fill in the screw channel opening with blocking material (e.g. Teflon, Cotton rolls) and complete with composite resin. Verify occlusion again.
Extractor (MT-RE160) may be used to release the Direct Insertion Tool, in cases of excess friction when reverse torque is not effective.
Turn clockwise to release

Pull up to remove

Guided Template

Guided Template
The MIS Quality System and Modern Lab systems comply with the following international quality standards: ISO 13485:2003 – Quality Management System for Medical Devices and ISO 9001: 2008 – Quality Management System. In addition, the MIS Quality System complies with Medical Device Directive 93/42/EEC. Please note that not all products are registered or available in every country or region.