

TIPS FOR INCREASED IMPLANT SUCCESS WITH FRIALIT-2

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Drill Usage

FRIALIT[®]-2 Drill Sequence and Color-Coding



Drill Life

- Drills should be replaced anytime they become dull or damaged.
- Drills should be replaced after approximately 20 uses (this may vary depending on the bone density in which they are used).
- The Stepped Drills should be replaced periodically. While each individual Stepped Drill may have only been used a few times, repeated autoclaving may dull them over time.

Recommended Speed: 800 rpm

- The D 5.5 and D 6.5 mm diameter drills should be decreased to 650 rpm in dense bone.
- Do not use excessive force when drilling. It is better to increase your speed than to put a lot of pressure on the drill at a slower speed.

Internal and External Irrigation Should be Used

- **USE COPIOUS IRRIGATION**
- Ensure the internal irrigation ports are clear. It is always a good practice to run the drill prior to clinical use to ensure the irrigation solution is free flowing.
- One drilling technique option is to pump the Stepped Drills when preparing the implant site to ensure the site is well irrigated. The final drill should be used in one pass, no pumping, to create a precise preparation.
- Since the greatest amount of friction is created in the denser cortical bone, external irrigation should also be utilized to cool this area.

Cleaning and Maintenance

- The Drill Cleaning Instrument is designed to clear the internal irrigation port in the drill shaft. An

orthodontic wire can be used to clear the irrigation port in the flutes.

- **Use the drill holder provided in the surgical tray to separate the drills in the ultra-sonic cleaner. If the drills contact each other in the ultra-sonic bath, damage could occur.**
- Ensure the drills, including the internal irrigation chamber, are thoroughly dried before they are wrapped for sterilization.

Miscellaneous

- Ensure the handpiece you are using is turning the drill in a centric rotation. If the chuck is worn or not holding the drill shank securely, an eccentric osteotomy may result.
- Ensure that the autoclave is completely clean and that sterilization is being monitored
- Use only recommended handpiece lubricant (e.g., W&H). Standard silicone oil can leave a residue

Bone Condensing

- Ensure there is bleeding from the condensed site. If the site is dry, the bone will not get nourished and osseointegration may be jeopardized. If the site becomes too dense, the final osteotome should be left in the site for approximately one minute. The Stepped Drill of the final length and diameter should be utilized to help finish the preparation and expose a fresh bony surface.

FRIALIT®-2 BoneCondensers and BoneExpanders are intended for use in poor quality bone as an alternative to drilling.

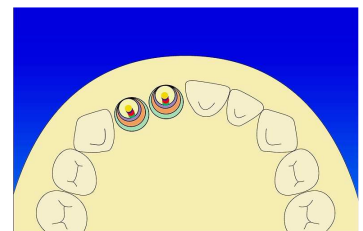


Vertical and Horizontal Spacing

- Ideally, the top of the implant should be slightly below the CEJs of the adjacent teeth at final seating; countersinking is not necessary. Select Implants are surgical aids that can be utilized after the Stepped Drill to evaluate the thickness of the surrounding bone and the coronal end of the implant in relation to the crest of bone. The implants should be at least 3 mm apart and at least 1.5 mm from adjacent teeth.
- According to the publication of Gomez et al*, the facial aspect of the implant should be lingual/palatal to the facial surface of the adjacent teeth.



FRIALIT®-2 Select Abutments, Sleeves and Implants



Implant Placement

- **Caution: only the inner vial and its contents are sterile!**

The outer vial is not sterile and should not be placed on the sterile tray. The circulating assistant should open the outer vial and ONLY the inner vial should be dropped onto the surgical tray.

1. Implant length indicator on the cap
2. Color-coded caps correspond to the implant diameter
3. Sealed outer vial to ensure sterility of the inner vial
4. Red dot on bottom of outer vial indicates product is sterile
5. Peel-off label has Cat No., Size, Lot Number and Exp Date



Attention! The torque for implant insertion and immediate loading should be below 50 Ncm. The minimum required torque for primary implant stability has not been clearly defined. All indications point to 35 - 50 Ncm.

- Due to the stepped osteotomy, the implant should seat with finger pressure to the second to last (Syncro stepped screw) or last step.
- If the implant does not push in about $\frac{3}{4}$ of the length, ensure the implant is lined up correctly with the prepared site or, if necessary, remove the implant and use the Cortical Drill to open up the coronal end of the site. If a Stepped Cylinder implant does not seat easily when tapping it into place, the ratchet wrench and driver for the Stepped Screw can be used to rotate the implant with apical pressure. This rotation should be used sparingly. Final seating should still be done using the mallet.
- In the posterior mandible, it is suggested to seat the Stepped Screw to placement by hand with the Ratchet Wrench, the surgical handpiece can be used instead at 10-15 rpm with irrigation. Final seating can be done by hand.
- To orient the internal hex correctly, one of the vertical grooves in the Stepped Cylinder or one of the six dots on the Stepped Screw Implant Driver should be oriented to the facial. This lines up the implant correctly if the case is to be restored with an angled abutment and the Horizontal Screw.
- A small amount of sterile Vaseline should be placed onto the screw and into the hex receptacle on the top of the Cover Screw, prior to soft tissue closure.
- If the Cover Screw becomes exposed prior to uncovering, remove the excess soft tissue with the punch and place a Gingiva Former.



**FRIALIT®-2
Cortical Drill**

The FRIALIT®-2 BoneProfiler can be used at implant uncovering if bone has grown over the Cover Screw or if a sloping ridge prevents seating of the Gingiva Former. The FRIALIT®-2

The FRIALIT®-2 BoneProfilers can also be used for single surgical stage (transgingival healing) if the lamellar bone prevents the gingiva former from seating correctly.



Immediate Implantation

Indications and Procedure

- Critical criteria for immediate implantation are an intact alveolus and primary stability of the implant. The ideal indication is avulsion without damage to the buccal plate.
- Do not place an implant into a site with active infection (drainage). Caution should also be used when placing an implant into an area with a long history of chronic infection and/or multiple surgical interventions. In these cases, it is recommended to remove the affected tooth, debride the area carefully, and wait at least six weeks for implant placement.
- One of the most important parameters for successful immediate placement is maintenance and protection of the labial/buccal plate. The tooth should be extracted as atraumatically as possible with the Perioste. If a portion of the buccal plate has been lost or fractured, consideration should be given to: augmenting the bone and placing the implant at a later date, placing the implant and augmenting utilizing a graft and/or membrane, or allow ~45 days healing and performing an ERE without the need for a graft or membrane.
- While the basis of the FRIALIT-2 System is to place an implant that is similar in diameter to that of the tooth being replaced, the width of bone must also be taken into account. The goal at final implant placement is to engage the mesial, distal and palatal/lingual walls, as well as extend apically beyond the extraction socket by 3-4 mm where possible. Ideally; **a .5 mm gap should remain between the implant and the buccal plate**. Select Implants can be used as a surgical aid to verify the fit of the implant into the socket prior to actual placement. Large gaps may require placement of graft material and primary closure.
- When placing wide diameter implants, especially in cortical bone, ensure that the labial plate is wide enough for adequate nutrition. Do not reduce the vestibular plate to an "egg shell". The goal is to have at least 2-3 mm of bone facial to the implant.
- Threaded implants are recommended in immediate extraction sites to improve anchorage. If good primary stability cannot be obtained, the case should be treated in two stages or, if necessary, the extraction socket allowed to fill-in and the implant placed at a later date.

Prosthetic Complications

Due to the design of the FRIALIT[®]-2 Implant-Abutment-Connection, screw loosening is rare. However, if it does occur, the following should

- Ensure no soft tissue has been trapped between the abutment and the implant.
- Tighten the abutment screw to the recommended torque- 24 Ncm.
- Use a new Hermetics Ring and ensure it is completely seated in the groove on the underside of the abutment by utilizing the Hermetic Seating Instrument. **Attention! Hermetics Ring must not be used for components with a diameter of D 3.4 and 3.8.**
- In multiple-unit cases, ensure the prosthesis has a passive fit. The stress of a mis-fitting framework can result in screw loosening.
- Treat bruxism and clenching dysfunction as necessary (e.g., night guards, etc.)
- Verify occlusion. The occlusal scheme will vary depending on which teeth are being replaced. However, in general implant-borne crowns should be in light centric occlusion with **controlled lateral contacts**. There should be no non-working side contacts.
- Ideally, the crown-to-implant ratio should be less than 1:1.



Seating a Hermetics Ring on an MH-6 Abutment

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