Surface Design For Enhanced Osseointegration
Multi-Level Surface Topography:
The impact of bone compression on bone-to-implant contact of osseointegrated implants: A canine study*

Center: Perio Imp Research Inc. Massachusetts, USA
Study Design: Pre-clinical canine mandible model
Sample Size: n=12-4 per test surface/time point; total=40 implants
Reported Outcomes: Histology, Bone-To-Implant Contact (BIC), radiography and stability (Ostell ISQ) at 0, 7, 14, 28 and 56 days
Relevance to 3i T3 Implants: All study implants have the 3i T3 with DCD® Surface. The study demonstrated substantial BIC percentages, as well as high ISQ values for all of the scenarios tested.

Pre-clinical studies results are not necessarily indicative of clinical performance. This was a pre-clinical study involving rodents, not human implants. Yon EDP and Naera M have financial relationships with BIOMET 3i LLC resulting from speaking engagements, consulting engagements and other retained services.

Effect Of Surface On Mucosal Health And Integration Testing:
A prospective, randomized-controlled clinical study of multi-topography surfaced implants in early loading cases*

Montoya C.† Napca C
http://biomet3i.com/Resources%20Center/Periodontology/Abstracts/Montoya%20C%20poster.pdf
Center: Mayor University, Santiago, Chile
Study Design: Prospective, randomized-controlled clinical trial
Sample Size: 49 patients; 137 study implants (108 test, 29 controls)
Reported Outcomes: Implant integration assessment via counter torque test at 6, 8 and 10 weeks
Relevance to 3i T3 Implants: Micromotion of the implant during the early healing phase is considered to be a primary reason for implant failure. The test implants in this clinical study have a surface topography identical to 3i T3 Implants with the DCD® surface. These implants show a higher degree of osseous fixation in the early healing period as compared to the control implants.

†Montoya C has a financial relationship with BIOMET 3i LLC resulting from speaking engagements, consulting engagements and other retained services.

Insertion Torque And ISQ Analysis

3i T3 Macrogeometry is designed to maximize Initial Bone-To-Implant Contact (IBIC). This is achieved by precise drill designs to match the minor implant diameter.

Clinical Performance of the 3i T3 Implant:
Observations and an Interim Report*

Östman PO †, DDS, PhD and Östman J DDS

49 patients, 137 study implants (108 test, 29 control)
Sample Size: n=2-4 per test surface/time point; total=40 implants
Study Design: Insertion Torque And ISQ Analysis

Mean ISQ 74.7 75.8 68.5 76.5 72.2 76.1 73.8

Tapered Implants
3i T3 DCD (Platform Switched)

Insertion Torque Greater Than 50Ncm
• 51% of Implants in Mandible
• 80% of Implants in Mandible

Observed ISQ With The 3i T3 Implant
"The 3i T3 Tapered Implant has allowed me to achieve ideal primary stability."
– Dr. PO Östman

Low Stability

Medium Stability

High Stability

89% Of 3i/T3 Implants Exhibited > 65 ISQ

**A Selection of > 500 Osstell Articles: Detailed references can be found at http://www.osstell.com/$-1/file/25035-1 1-osstell-articles-summaries-lt.pdf
Note: The references noted in the Osstell ISQ table were established by Osstell. Refer to the Osstell piece noted above to see them.
For complete and detailed instructions, please reference the 3i T3 Implant Surgical Manual.

**Tapered 3.25mm(D) Implants**

*Recommended drill speeds for all drills is 1200 – 1500rpm.*

*The Quadr Shaping Drills must be used without pumping actions.*

*The recommended implant placement speed is 15 – 20rpm.*

*The implant placement torque may exceed 90Ncm.*

*Hand ratcheting may be necessary to fully seat the implant in the osteotomy.*

*Certain Internal Connection Driver Tips should be inspected for wear before use.*

*Tapping is required for implant placement in dense bone (Type I) or when the insertion torque is more than 90Ncm.*

**IMPORTANT NOTE:** Exceeding insertion torque of more than 90Ncm may deform or strip the driver tip or the implant’s internal hex and may possibly delay the surgical procedure.

- It is recommended that reusable drills be replaced after 15 uses.
- Certain Internal Connection Driver Tips should be inspected for wear before use.
- Hand ratcheting may be necessary to fully seat the implant in the osteotomy.
- The implant placement torque may exceed 50Ncm.
- The recommended implant placement speed is 15 – 20rpm.
- The Quad Shaping Drills must be used without pumping actions.
- The recommended drill speed for all drills is 1200 – 1500rpm.

**Tapered Platform Switched 4mm(D) X 3.4mm(P) & 4mm(D) Implants**

**Tapered Platform Switched 5mm(D) X 4.1mm(P) & 5mm(D) Implants**

**Tapered Platform Switched 6mm(D) X 5mm(P) & 6mm(D) Implants**

**For More Information, Please Contact Your Local BIOMET 3i Sales Representative.**

*For complete and detailed instructions, please reference the 3i T3 Implant Surgical Manual.*