Implant System

The Original Spiral Implant

AlphaBio®
Implantology

SPI

The Original Spiral Implant
About Alpha-Bio TEC.

For over 25 years Alpha-Bio Tec has been a leader in developing, manufacturing and marketing implants, prosthetics parts, biomaterials and a variety of dental surgical instrumentation. Alpha-Bio Tec believes in making implantology simple, while manufacturing the highest quality products for the global market and providing customers with the best service possible. Simplantology!

Originality and Innovation

After the SPI was launched, the uniquely shaped Spiral Implant was met with suspicion. Today, more than 10 years after, the SPI is the most widely used implant of Alpha-Bio Tec and has become a role model in the implantology market.

The SPI is a tapered internal hex implant with a unique combination of design features that enable easy insertion and very high initial stability. The unique shape of the implant body and its variable thread design (double thread 2x2.4 mm) equip it with some exceptional abilities such as the ability to change direction during placement and a notable success rate.

Implant surface process:
- Sand-blasting to create a macro surface of 20-40 microns
- Double thermal acid etching process to create micro-pitting between 1-5 microns

NanoTec advantages:
- Increased early bone-to-implant contact
- Increased stability
- Shorter healing period
- Higher predictability

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IMPROVED INTERNAL HEX
Design Features:
- Extremely precise internal hex
- One platform for all diameters
Advantages:
- Perfect implant-abutment connection
- Simple restoration process

CORONAL PART
Design Features:
- Micro rings*
- Bone platform shifting
- Rough surface to the top
- Threads reaching the top of the implant
Advantages:
- Greater surface area
- Prevention of alveolar crest cortical bone resorption
- Better load distribution
- Decreased crestal stress

- The number of micro rings may vary between different implant diameters and/or lengths.

Note: The illustration shows SPI implant Ø3.75 and 13 mm length.

PROVEN INTERNAL HEX DESIGN FEATURES:
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IMPLANT BODY AND CORE
Design Features:
- Tapered body
- Tapered core - more pronounced than the threads
- Osteotome like condensing body
Advantages:
- Bone condensing
- Primary stabilization
- Easy insertion

IMPLANT THREADS
Design Features:
- Double thread design with pitch 2.4
- Wide thread step
- Threads increase in the apical direction
- Variable threads design:
  - Coronal - thicker square threads
  - Middle - thinner square threads
  - Apical - V threads
Advantages:
- Easy insertion
- High primary stability
- Bone condensing
- Self drilling
- Self tapping

APICAL PART
Design Features:
- Sharp and deep threads
- Narrow core
- Apical blades
- Straight apical border
- Condensing taper
Advantages:
- Self tapping
- Self drilling
- Easy insertion
- Helps prevent damage to anatomical structures
- Enables the implant to penetrate small diameter prepared sites

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SEM of surface

Histology after 2 months
**Clinical Advantages**

- Bone condensing properties and very high primary stability
- Self-directing during insertion
- Enables the changing of direction for optimal restorative position
- Enables a smaller osteotomy, which results in minimal bone loss and reduced trauma
- Enables narrow ridge expansion
- Reduces the risk of damaging neighboring teeth
- Reduces the risk of perforating the lingual or buccal cortex

**Minor Changes in Parallelism**

The unique self drilling capability of the SPI implant makes it possible to change the direction of the implant during placement. This helps achieve parallelism between implants and optimize implant placement. Implant redirection is simple - rotate it backwards 2-3 turns and then insert it into the desired position.

**Initial Stability in Soft bone and After Extraction**

The implant’s ability to achieve very high primary stability in minimal bone space and after extraction, is desirable in most clinical situations. The unique SPI implant core, thread-design and apical part allow it to be anchored and stabilized in very soft bone and after extraction, due to its ability to penetrate prepared sites that are much narrower in diameter than those required for regular implants.

**STABILIZATION AFTER EXTRACTION**

1. Drill 2-3mm apically to the extraction socket and continue drilling according to the drill protocol
2. Begin inserting the implant into the prepared site
3. Continue inserting the implant to the final depth. Bone augmentation may be followed immediately if indicated
4. Place the cover screw and suture

**STABILIZATION IN SOFT BONE**

5. Begin inserting the implant into the desired position
6. Start inserting the implant
7. Rotate the implant backwards 2-3 times
8. Finish the drilling protocol according to the implant diameter and length
9. Continue inserting the implant until the implant is fully seated in the desired position
10. Drill using the 2mm laser drill
11. If the cortical bone is hard, you can use this drill as a countersink
12. Begin inserting the implant into the prepared site until it achieves sufficient retention and stability
Important:
- In cases of extremely hard bone it is recommended to make adjustments to the specific site.
- The drill tip length should be considered when preparing the osteotomy.
- While the protocol is recommended for most clinical cases, additional professional consideration may be required in specific cases.

Achieves very high primary stability
- Enables the changing of direction during placement
- Can penetrate smaller diameter prepared sites
- Ideal for immediate loading and immediate implantation
- Ideal for soft bone
Implant System

For more information, please visit our website www.alpha-bio.net


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