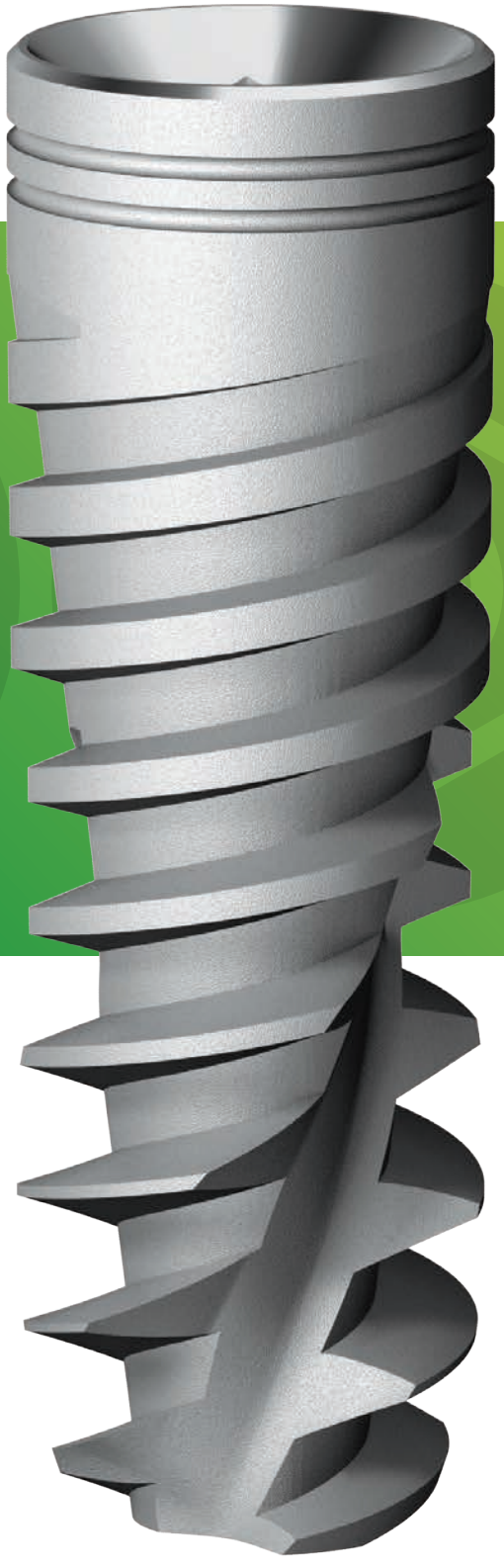
IH - Internl Hex



AlphaBio TEC
Simplantology

# Spiral

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

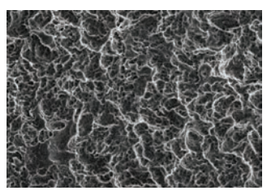
After the Spiral was launched, the uniquely shaped Spiral Implant was met with suspicion. Today, more than 10 years after, the Spiral is the most widely used implant of Alpha-Bio Tec and has become a role model in the implantology market.

The Spiral 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.

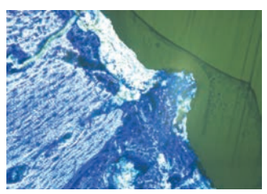
ALPHA-BIO TEC NANOTEC™

**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™ implant surface process advantages:**
- Increased early BIC (Bone to Implant Contact)
- High long-term BIC
- Accelerated and improved Osseointegration process
- Increased secondary stability
- Shortened healing period
- Higher predictability



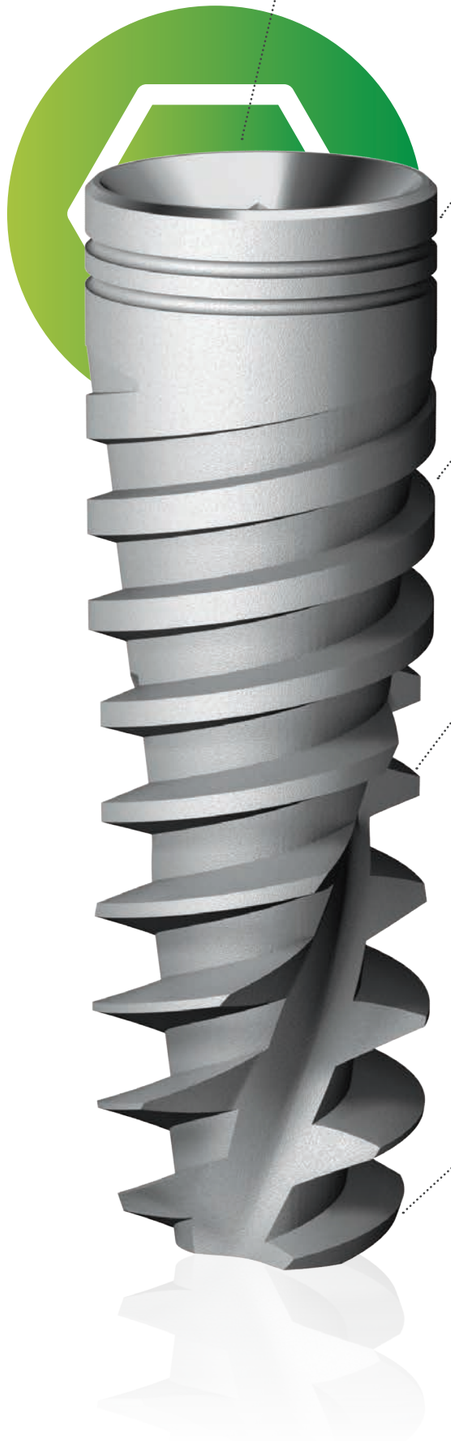
SEM of implant surface
Magnification: X 1000



Histology*
Magnification: X 200

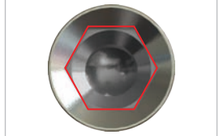
* **References:** Light microscopy photography of non-decalcified histology staining toloidin blue. TIBIA of New Zealand rabbits. The study of Dr. Omer Cohen and Prof. Ofer Moses, Tel-Aviv University. Histology performed in laboratory of Prof. Dr. Dr. Daniel Rothamel, University of Cologne, 2014.





### INTERNAL HEX
**Design Features:**
- Extremely precise and durable
- One platform for all diameters
- Platform switching

**Advantages:**
- Solid connection
- Perfect implant-abutment fit
- Simple restoration process



### CORONAL PART
**Design Features:**
- Micro rings*

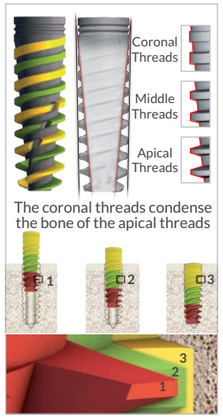
**Advantages:**
- Greater surface area
- Prevention of alveolar crest cortical bone resorption
- Better load distribution
- Decreased crestal stress
- Increased BIC (Bone to Implant Contact)

### IMPLANT BODY AND CORE
**Design Features:**
- Slightly tapered body
- Tapered core - more pronounced than the body
- Osteotome like condensing body

**Advantages:**
- High primary stability
- High bone condensation properties
- Easy insertion

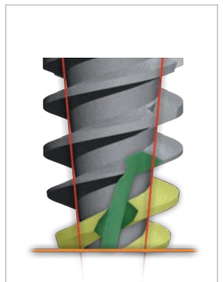
### IMPLANT THREADS
**Design Features:**
- Double thread design with 2.4 mm step
- Wide thread step
- Threads depth increase in the apical direction
- Variable threads design:
  - o Coronal – thicker square threads
  - o Middle – thinner square threads
  - o Apical - V threads

**Advantages:**
- Easy and smooth insertion
- High primary stability
- Bone condensing
- Self drilling
- Self tapping
- Redirecting capability
- Excellent bone grip
- Increase BIC (Bone to Implant Contact)




### APICAL PART
**Design Features:**
- Sharp and deep threads
- Narrow core
- Apical blades
- Flat apical border
- Condensing flute

**Advantages:**
- Self tapping
- Self drilling
- Easy insertion
- Helps prevent damage to anatomical structures
- Enables the implant to penetrate small diameter prepared sites



* The number of micro rings may vary between different implant diameters and/or lengths.
Note: The illustration shows Spiral implant Ø3.75 / 13 mm.

## Clinical Advantages

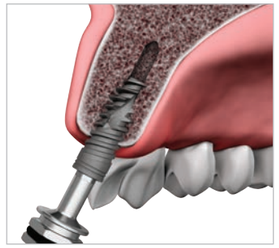
- Bone condensing properties, highest primary stability
- Enables the changing of direction for optimal restorative position
- Enables narrow osteotomy, which results in minimal bone loss and reduced trauma
- Enables narrow ridge expansion
- Reduces the risk of damaging adjacent teeth
- Reduces the risk of perforating the lingual or buccal cortex

## Minor Changes in Parallelism

The unique self drilling capability of the Spiral implant makes it possible to change the direction of the implant during placement. This helps to achieve parallelism between implants and to optimize implant placement. The below images demonstrate how to perform redirection during implantation of Spiral

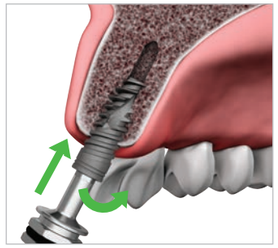
1

Drill according to the suggested protocol



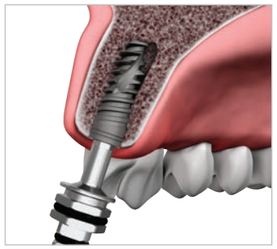
2

Insert the implant



3

Change the orientation of the implant while inserting it



4

Continue the insertion until the implant is fully positioned

## Initial Stability in Soft bone and After Extraction

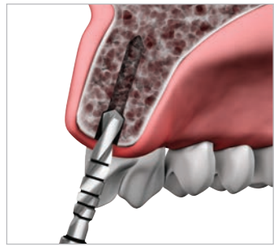
The Spiral unique thread design and apical part leads to high primary stability ; thus making the implant suitable for soft bone, narrow ridges and following tooth extraction.

### STABILIZATION IN SOFT BONE

Using Spiral Ø3.75/L13

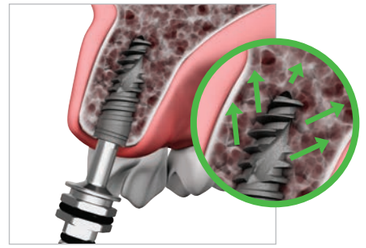
5

Drill using the 2mm drill



6

Drill using the 2.8 mm drill



7

Insert the implant into the prepared site until it achieves sufficient retention and stability

### STABILIZATION AFTER EXTRACTION

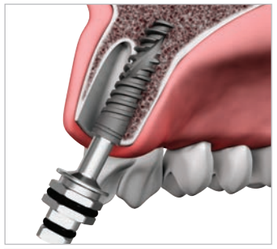
Using Spiral Ø3.75/L13

8

Drill 2-3mm apically to the extraction socket and continue drilling according to the drill protocol

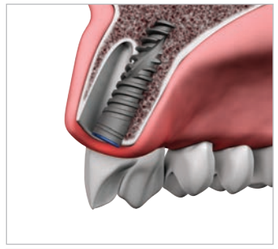
9

Insert the implant into the prepared site



10

Continue inserting the implant to the final depth. Bone augmentation may be followed if needed

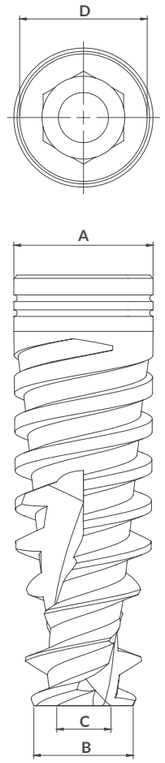


11

Place the cover screw and suture

# Ordering Information and Dimensions

| Diameter | Length | Ref. No. | Dimensions | | | |
|---|---|---|---|---|---|---|
| | | | A | B | C | D |
| Ø 3.3  | 8 mm | 1308 | Ø 3.7 | Ø 2.55 | Ø 1.55 | Ø 3.5 |
| | 10 mm | 1300 | Ø 3.7 | Ø 2.55 | Ø 1.55 | Ø 3.5 |
| | 11.5 mm | 1301 | Ø 3.7 | Ø 2.55 | Ø 1.55 | Ø 3.5 |
| | 13 mm | 1303 | Ø 3.7 | Ø 2.55 | Ø 1.55 | Ø 3.5 |
| | 16 mm | 1306 | Ø 3.7 | Ø 2.55 | Ø 1.55 | Ø 3.5 |
| Ø 3.75  | 8 mm | 1358 | Ø 3.85 | Ø 2.9 | Ø 2 | Ø 3.5 |
| | 10 mm | 1350 | Ø 3.85 | Ø 2.9 | Ø 2 | Ø 3.5 |
| | 11.5 mm | 1351 | Ø 3.85 | Ø 2.9 | Ø 2 | Ø 3.5 |
| | 13 mm | 1353 | Ø 3.85 | Ø 2.9 | Ø 2 | Ø 3.5 |
| | 16 mm | 1356 | Ø 3.85 | Ø 2.9 | Ø 2 | Ø 3.5 |
| Ø 4.2  | 8 mm | 1338 | Ø 4.2 | Ø 3 | Ø 2.1 | Ø 3.85 |
| | 10 mm | 1330 | Ø 4.2 | Ø 3 | Ø 2.1 | Ø 3.85 |
| | 11.5 mm | 1331 | Ø 4.2 | Ø 3 | Ø 2.1 | Ø 3.85 |
| | 13 mm | 1333 | Ø 4.2 | Ø 3 | Ø 2.1 | Ø 3.85 |
| | 16 mm | 1336 | Ø 4.2 | Ø 3 | Ø 2.1 | Ø 3.85 |
| Ø 5  | 8 mm | 1348 | Ø 4.95 | Ø 3.3 | Ø 2.6 | Ø 3.85 |
| | 10 mm | 1340 | Ø 4.95 | Ø 3.3 | Ø 2.6 | Ø 3.85 |
| | 11.5 mm | 1341 | Ø 4.95 | Ø 3.3 | Ø 2.6 | Ø 3.85 |
| | 13 mm | 1343 | Ø 4.95 | Ø 3.3 | Ø 2.6 | Ø 3.85 |
| | 16 mm | 1346 | Ø 4.95 | Ø 3.3 | Ø 2.6 | Ø 3.85 |
| Ø 6  | 8 mm | 1368 | Ø 5.95 | Ø 4.6 | Ø 3.35 | Ø 3.85 |
| | 10 mm | 1360 | Ø 5.95 | Ø 4.6 | Ø 3.45 | Ø 3.85 |
| | 11.5 mm | 1361 | Ø 5.95 | Ø 4.6 | Ø 3.45 | Ø 3.85 |
| | 13 mm | 1363 | Ø 5.95 | Ø 4.6 | Ø 3.45 | Ø 3.85 |

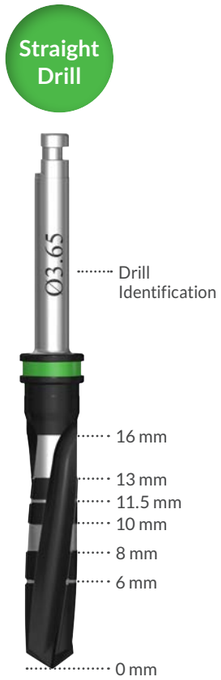



# Drill Protocol

## Straight Drilling Sequence

| Diameter | Soft bone Type IV | Medium Bone Type II&III | Hard bone Type I |
|---|---|---|---|
| Ø 3.3 | 2.0 | 2.0<br>2.8 | 2.0<br>2.8<br>3.2 Cortical |
| Ø 3.75 | 2.0<br>2.8 | 2.0<br>2.8<br>3.2 | 2.0<br>2.8<br>3.2<br>3.65 Cortical |
| Ø 4.2 | 2.0<br>2.8<br>3.2 | 2.0<br>2.8<br>3.2<br>3.65 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1 Cortical |
| Ø 5.0 | 2.0<br>2.8<br>3.2<br>3.65 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1<br>4.5 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1<br>4.5<br>4.8 Cortical |
| Ø6.0 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1<br>4.8 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1<br>4.8<br>5.2 | 2.0<br>2.8<br>3.2<br>3.65<br>4.1<br>4.8<br>5.2<br>5.8 Cortical |

Cortical – Drill through cortical plate.




# Spiral – Why?

- 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

IH - Internl Hex

Alpha-Bio Tec's products are cleared for marketing in the USA* and are CE-marked in accordance with the Council Directive 93/42/EEC.
Alpha-Bio Tec's complies with EN ISO 13485:2016. Product availability may vary between countries.

Scan to view our Lifetime Warranty

**Check our website www.alpha-bio.net for the most updated brochure version**