Surgical Guide

SpiralTech™
Superior Dental Implants

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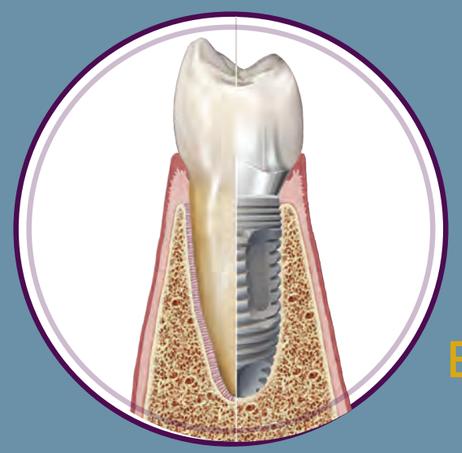
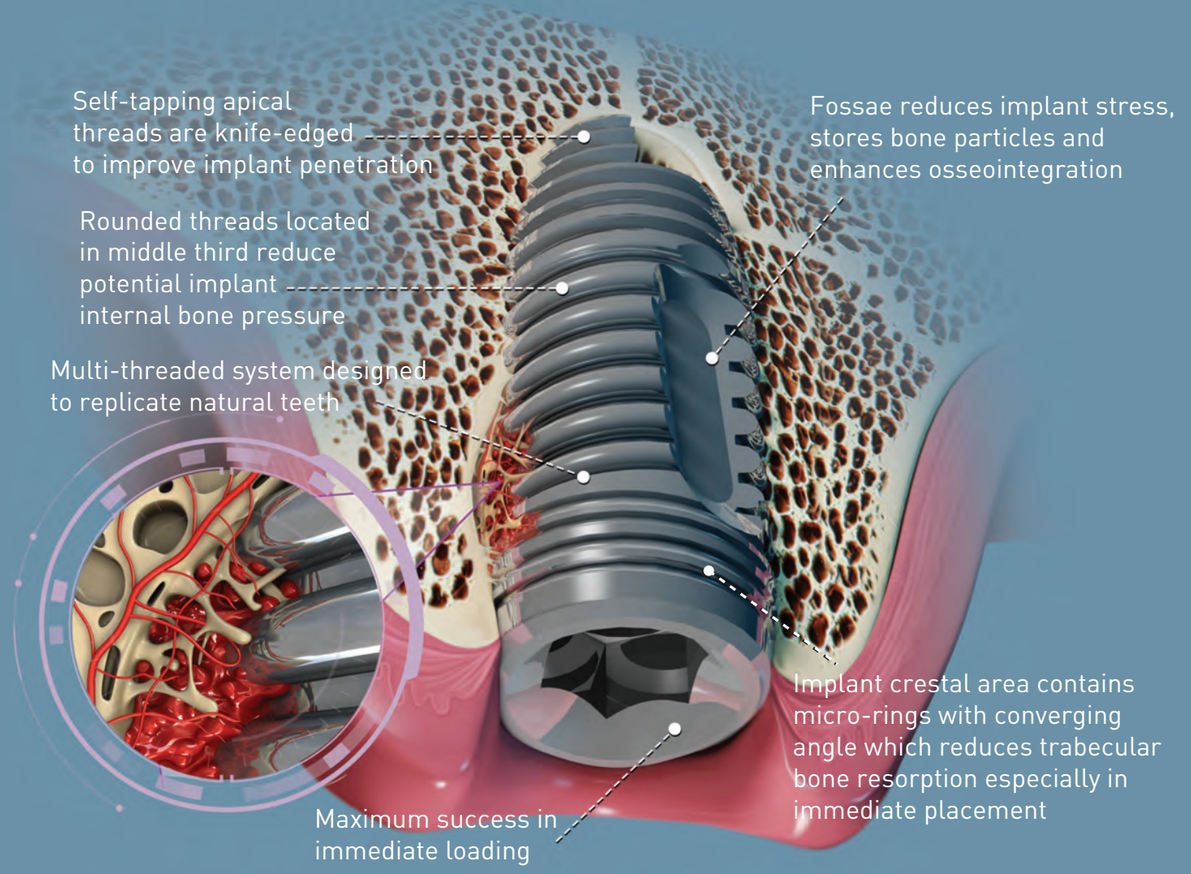


HEX CONNECTION

CONICAL CONNECTION

ESi Implant maintains root formation

ONE OF OUR SUPERIOR PRODUCTS, ESi IMPLANT



Introduction

Initial Appointments

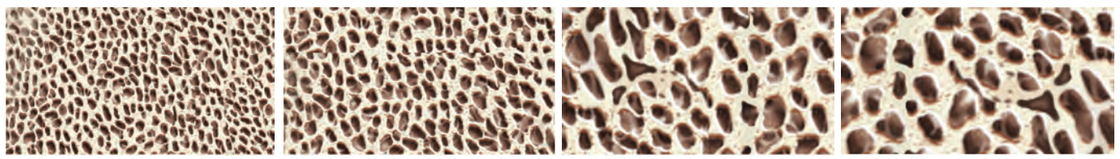
- Medical and Dental History
- Dental Evaluation and X-ray Examinations
- Diagnostic Casts
- Preliminary Discussion of Treatment Alternatives
- Decision to Proceed with Treatment
- Initial Treatment Plan, Case Presentation, and Alternatives
- Clinical/Laboratory Procedure Prior to Additional Diagnostic Records
- Extra Office Diagnostic Orders Setup, Computed Tomography Scans, Tests for Medical Evaluation, Consultation, and Team Members
- Diagnostic Wax-up of Final Results on Duplicate Diagnostic Casts
- Final Treatment Plan and Alternatives
- Medical Laboratory Tests Evaluated
- Prescriptions and Postoperative Instructions
- Consent Forms and Request for Treatment Forms
- Pictures of Existing Condition

Treatment Planning

- Diagnose patient with radiograph. Take Aliginate Impression and Study Model to take record of upper and lower jaw.
- Diagnosis of the needed reconstructed area:
  a. Location of the missing teeth
  b. Bone Type
  c. Bone Width
  d. Bone Height (from Sinus floor or Inferior Alveolar Nerve to Crestal area of the bone)
  e. Decide on immediate or non-immediate loading and follow the chart, make sure to distance your implant 1.5mm away from Alveolar Nerve or Sinus Floor

Presurgical Restorative Appointment

- Carries Removal, Extractions, Temporary Teeth
- Periodontal Treatment, Endodontic Therapy, Orthodontics
- Occlusal Vertical Dimension
- Occlusal Plane Correction, Treatment Prosthesis, Recontour Existing Teeth, Enamoplasty
- Transitional Prosthetics (Removal or Fixed) or Diagnostic Try-In; Tissue Conditioning
- Impression for Surgical Guide Template (If Oral Condition Altered from Initial Diagnostic Cast)



Type I (Dense)

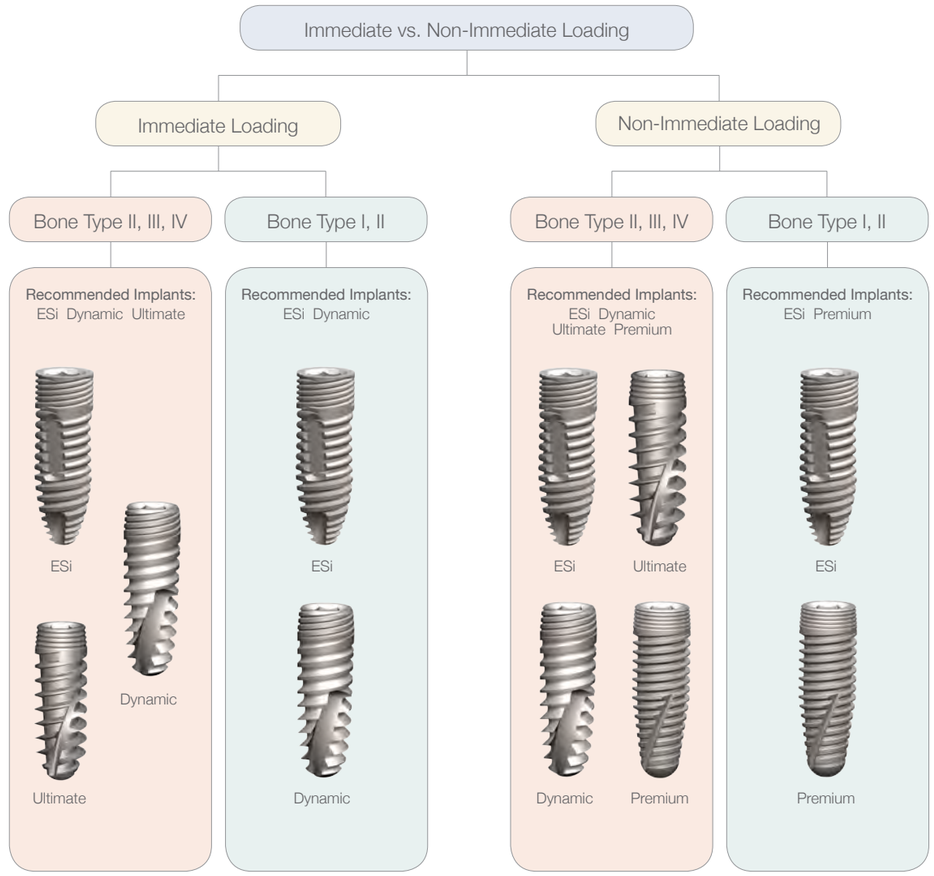
Type II
Dense trabecular bone

Type III
Trabecular bone

Type IV (Soft)
Low-density trabecular bone

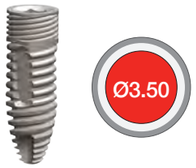
Implant Design

- Help with Diagnosis
  a. Crown Lengthening
  b. Occlusal Plane
  c. Hopeless Teeth
- Evaluate the Psychologic Profile of the Patient
- Denture before Implant Surgery
- Improve Soft Tissues before Final Impression for Implant Overdentures
- Postoperative to Implant Surgery
- Evaluate Occlusal Vertical Dimension
- Evaluate Temporomandibular Joint Dysfunction
- Improve Implant Position Related to Final Tooth Position
- Evaluate Esthetics before Surgery
- Evaluate Hygienic Contours of Fixed Restorations
- Determine whether Removable Restoration is Required for Maxillary Lip Support (RP versus FP)
- Protect Bone Graft or Implants During Healing
- Patient's Financial and Compliance Management
- Progressive Bone Loading
- Phonetics and Esthetics for Full Arch Implant-Fixed Prosthetics on Complete Edentulous Patients



ESi Implant *with Standard Hex or Conical Connection*

The Essential Spectrum Implant (ESi) has been pantented. The ESi implant is versatile and can be used in most clinical situations. Placement is intuitive and fast. Great for beginning and experienced surgeons alike.



Length (mm)	HEX Catalog No.	CONICAL Catalog No.
8.0	ESi35008	ESiC35008
10.0	ESi35010	ESiC35010
11.5	ESi35011	ESiC35011
13.0	ESi35013	ESiC35013
15.0	ESi35015	ESiC35015

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	ESi43006	ESiC43006
8.0	ESi43008	ESiC43008
10.0	ESi43010	ESiC43010
11.5	ESi43011	ESiC43011
13.0	ESi43013	ESiC43013
15.0	ESi43015	ESiC43015

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	ESi50006	ESiC50006
8.0	ESi50008	ESiC50008
10.0	ESi50010	ESiC50010
11.5	ESi50011	ESiC50011
13.0	ESi50013	ESiC50013
15.0	ESi50015	ESiC50015

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	ESi60006	ESiC60006
8.0	ESi60008	ESiC60008
10.0	ESi60010	ESiC60010
11.5	ESi60011	ESiC60011
13.0	ESi60013	ESiC60013
15.0	ESi60015	ESiC60015

Premium Implant *with Standard Hex or Conical Connection*

The Premium Implant is a conventionally designed implant. While it can be used in all clinical situations, its conservative threads are best suited for healed ridges. All implants are provided with the corresponding cover screw and average-size healing abutment.

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
8.0	PR35008	PRC35008
10.0	PR35010	PRC35010
11.5	PR35011	PRC35011
13.0	PR35013	PRC35013
15.0	PR35015	PRC35015

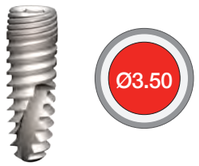
Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	PR43006	PRC43006
8.0	PR43008	PRC43008
10.0	PR43010	PRC43010
11.5	PR43011	PRC43011
13.0	PR43013	PRC43013
15.0	PR43015	PRC43015

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	PR50006	PRC50006
8.0	PR50008	PRC50008
10.0	PR50010	PRC50010
11.5	PR50011	PRC50011
13.0	PR50013	PRC50013
15.0	PR50015	PRC50015

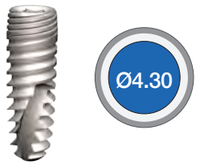
Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	PR60006	PRC60006
8.0	PR60008	PRC60008
10.0	PR60010	PRC60010
11.5	PR60011	PRC60011
13.0	PR60013	PRC60013
15.0	PR60015	PRC60015

Dynamic Implant *with Standard Hex or Conical Connection .....*

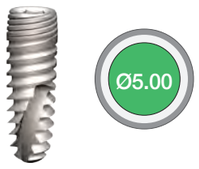
The Dynamic Implant is an evolved version of the successful high-torque implants currently available on the market. This next generation design maintains the same features that provide initial stability, but has thread refinements. It is a suitable implant for immediate placement and / or immediate loading.



Length (mm)	HEX Catalog No.	CONICAL Catalog No.
8.0	DY35008	DYC35008
10.0	DY35010	DYC35010
11.5	DY35011	DYC35011
13.0	DY35013	DYC35013
15.0	DY35015	DYC35015



Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	DY43006	DYC43006
8.0	DY43008	DYC43008
10.0	DY43010	DYC43010
11.5	DY43011	DYC43011
13.0	DY43013	DYC43013
15.0	DY43015	DYC43015



Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	DY50006	DYC50006
8.0	DY50008	DYC50008
10.0	DY50010	DYC50010
11.5	DY50011	DYC50011
13.0	DY50013	DYC50013
15.0	DY50015	DYC50015

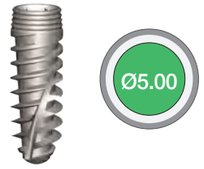
Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	DY60006	DYC60006
8.0	DY60008	DYC60008
10.0	DY60010	DYC60010
11.5	DY60011	DYC60011
13.0	DY60013	DYC60013
15.0	DY60015	DYC60015

Ultimate Implant *with Standard Hex or Conical Connection .....*

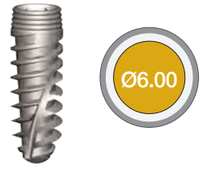
The Ultimate Implant is designed for initial stability, even in soft bone. It is a suitable implant for immediate placement and / or immediate loading. Due to its design, it can be slightly adjusted to reposition implant during the surgery.

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
8.0	UL35008	ULC35008
10.0	UL35010	ULC35010
11.5	UL35011	ULC35011
13.0	UL35013	ULC35013
15.0	UL35015	ULC35015

Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	UL43006	ULC43006
8.0	UL43008	ULC43008
10.0	UL43010	ULC43010
11.5	UL43011	ULC43011
13.0	UL43013	ULC43013
15.0	UL43015	ULC43015

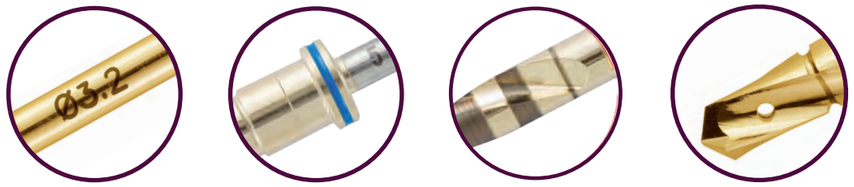


Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	UL50006	ULC50006
8.0	UL50008	ULC50008
10.0	UL50010	ULC50010
11.5	UL50011	ULC50011
13.0	UL50013	ULC50013
15.0	UL50015	ULC50015



Length (mm)	HEX Catalog No.	CONICAL Catalog No.
6.0	UL60006	ULC60006
8.0	UL60008	ULC60008
10.0	UL60010	ULC60010
11.5	UL60011	ULC60011
13.0	UL60013	ULC60013
15.0	UL60015	ULC60015

ESi / Premium Surgical Drills .....



Drill No.	1	2	3	4	5	6	7	8
ESi/Premium	1.2/2.0	2.0/2.8	2.8/3.1	3.1/3.4	3.4/3.9	3.9/4.4	4.4/4.8	4.8/5.8
Catalog No.	ESiPR1	ESiPR2	ESiPR3	ESiPR4	ESiPR5	ESiPR6	ESiPR7	ESiPR8

Diameter Ø	IV, III Soft Bone	III, II Medium Bone	I Hard Bone
3.5	1	1-2	1-3
4.3	1-3	1-4	1-5
5.0	1-5	1-6	1-7 (CS)
6.0	1-6	1-7	1-8 (CS)

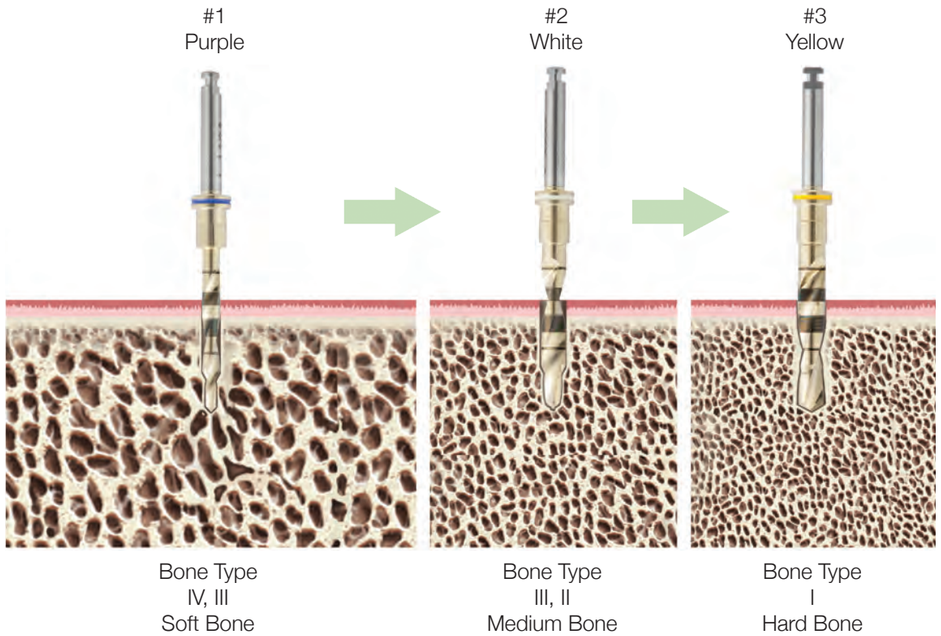
Dynamic / Ultimate Surgical Drills .....

Drill No.	1	2	3	4	5	6	7	8
Dynamic/ Ultimate	1.2/1.8/2.4	1.8/2.4/2.8	2.4/2.8/3.1	2.8/3.1/3.3	3.3/3.5/4.1	3.5/4.1/4.7	4.1/4.7/5.2	4.7/5.2/5.8
Catalog No.	DUAL1	DUAL2	DUAL3	DUAL4	DUAL5	DUAL6	DUAL7	DUAL8

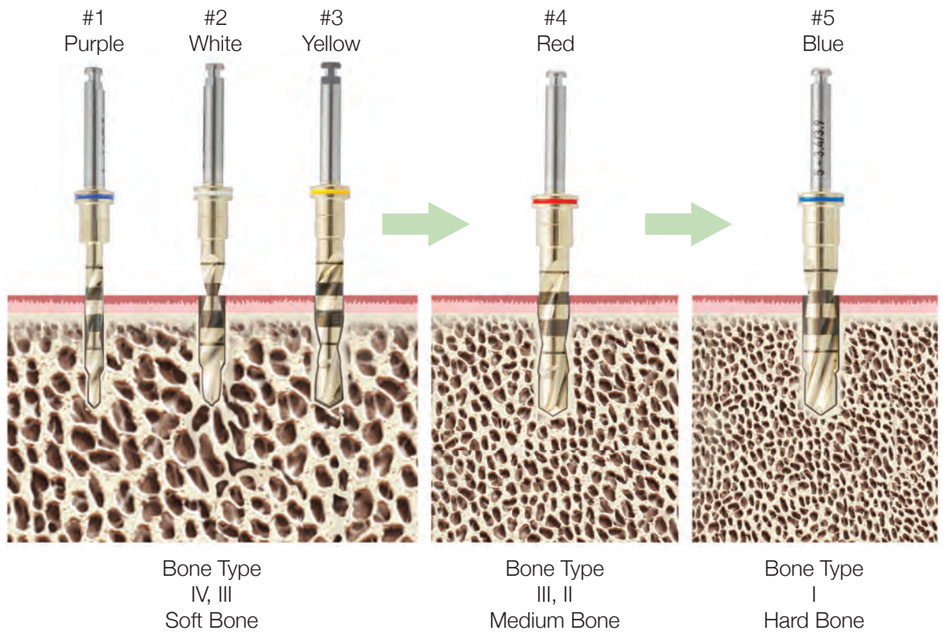
Diameter Ø	IV, III Soft Bone	III, II Medium Bone	I Hard Bone
3.5	1	1-2	1-3
4.3	1-3	1-4	1-5
5.0	1-5	1-6	1-7 (CS)
6.0	1-6	1-7	1-8 (CS)

ESi / Premium Drill Sequence .....

ø 3.5 Hex or NP

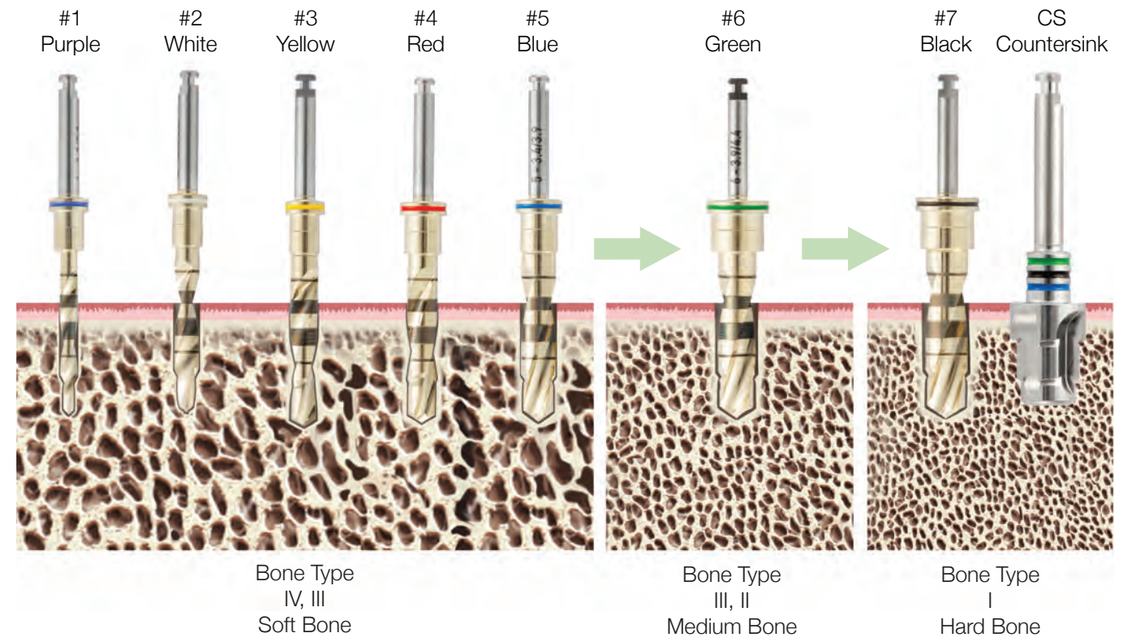


ø 4.3 Hex or RP

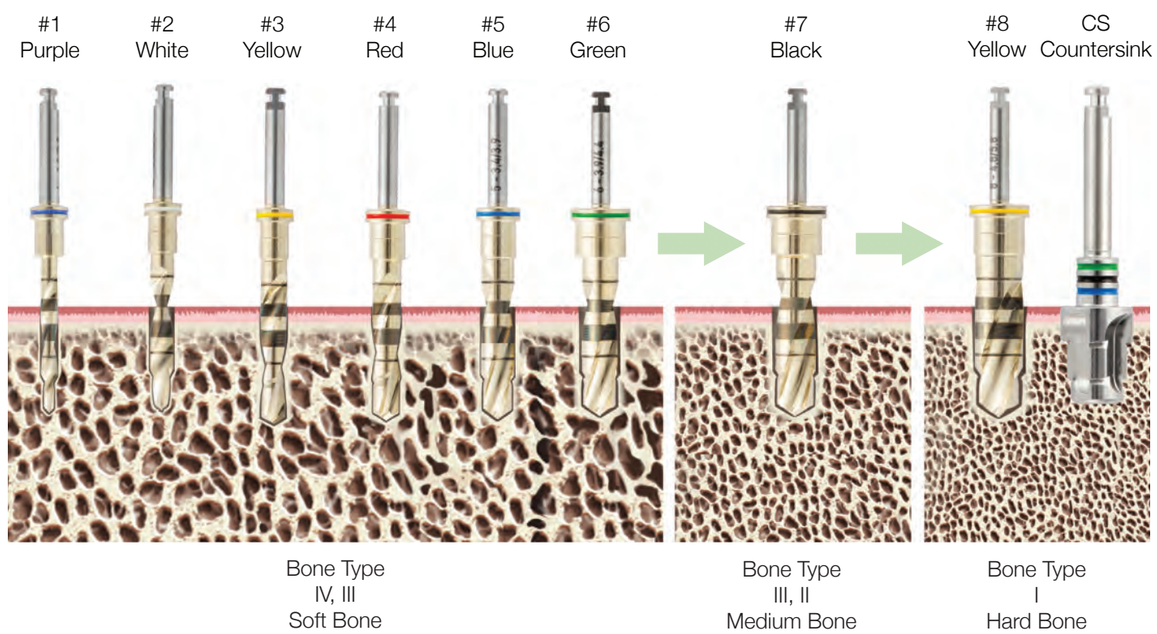


ESi / Premium Drill Sequence .....

ø 5.0 Hex or RP



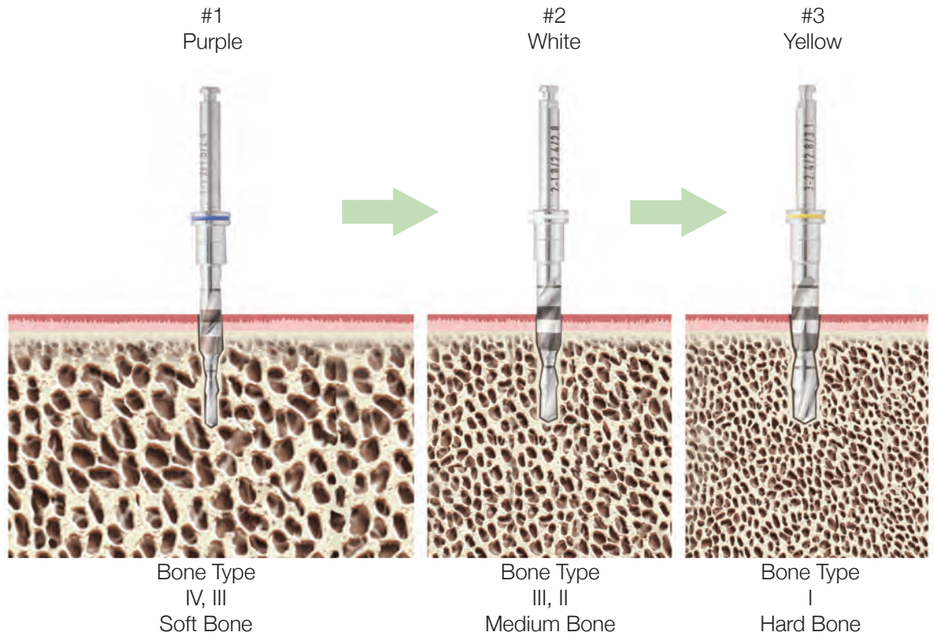
ø 6.0 Hex or RP



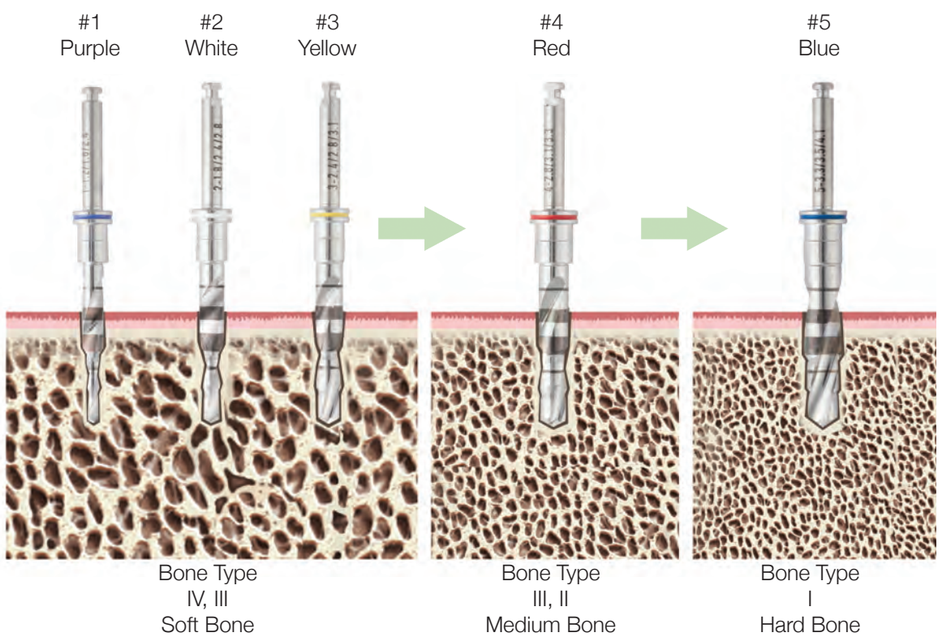
NOTE: Make sure you are at least 1.5mm away from Inferior Alveolar Nerve or Sinus Floor

Ultimate / Dynamic Drill Sequence .....

ø 3.5 Hex or NP

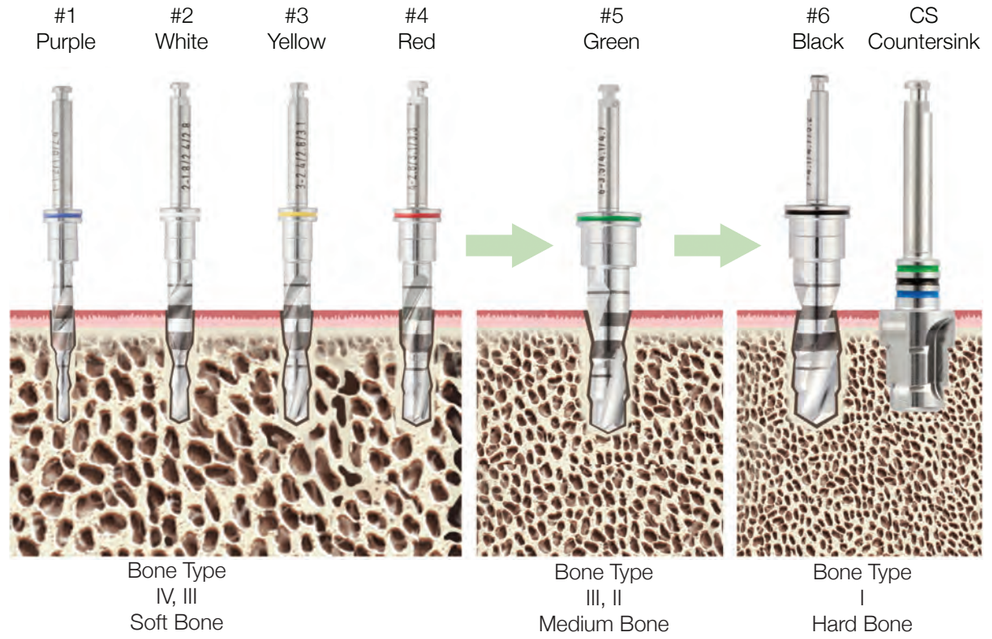


ø 4.3 Hex or RP

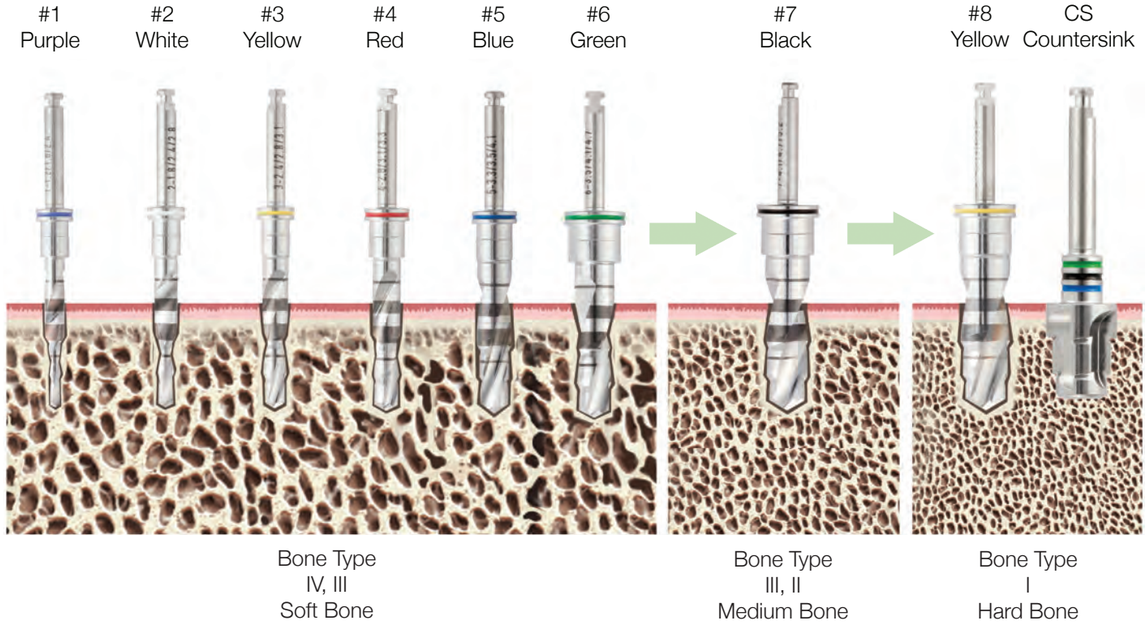


Ultimate / Dynamic Drill Sequence .....

ø 5.0 Hex or RP



ø 6.0 Hex or RP



NOTE: Make sure you are at least 1.5mm away from Inferior Alveolar Nerve or Sinus Floor

Drill Stoppers

Length	L8	L10	11.5	L13
Drills	1, 2, 3	1, 2, 3	1, 2, 3	1, 2, 3
Implant Ø	3.5mm	3.5mm	3.5mm	3.5mm
Drills	4, 5	4, 5	4, 5	4, 5
Implant Ø	4.3mm	4.3mm	4.3mm	4.3mm
Drills	6, 7, 8	6, 7, 8	6, 7, 8	6, 7, 8
Implant Ø	5.0mm, 6.0mm	5.0mm, 6.0mm	5.0mm, 6.0mm	5.0mm, 6.0mm

Implant Length	8	10	11.5	13
Drill #	1,2,3	1,2,3	1,2,3	1,2,3
Stop ø mm	4.5	4.5	4.5	4.5
Implant ø mm	3.5	3.5	3.5	3.5
Stopper length mm	14.3	12.3	10.8	9.3
Laser mark	Red Red	Red Blue	Red Green	Red Yellow
Catalog No.	RRS800	RBS100	RGS115	RYS130

Implant Length	8	10	11.5	13
Drill #	4,5	4,5	4,5	4,5
Stop ø mm	5.3	5.3	5.3	5.3
Implant ø mm	4.3	4.3	4.3	4.3
Stopper length mm	14.3	12.3	10.8	9.3
Laser mark	Blue Red	Blue Blue	Blue Green	Blue Yellow
Catalog No.	BRS800	BBS100	BGS115	BYS130

Implant Length	8	10	11.5	13
Drill #	6,7,8	6,7,8	6,7,8	6,7,8
Stop ø mm	7.2	7.2	7.2	7.2
Implant ø mm	5.0,6.0	5.0,6.0	5.0,6.0	5.0,6.0
Stopper length mm	14.3	12.3	10.8	9.3
Laser mark	Green Red	Green Blue	Green Green	Green Yellow
Catalog No.	GRS800	GBS100	GGS115	GYS113

Surgical Tools

MOTOR MOUNTS

	Drill Extender	Tissue Punch	Depth Gauge	Motor Screw Driver Hex	Motor Implant Driver Hex	Motor Implant Driver Conical NP	Motor Implant Driver Conical RP
Size		ø 3.0x4.0mm		1.25mm	2.42mm	2.25mm	2.65mm
Length	26mm	ø 4.0x5.0mm		22/28mm	22/28mm	22/28mm	22/28mm
Catalog No.	DE26	TPU30/40 TPU40/50	DDM15	MMH122 MMH128	MMH222 MMH228	MMCNP222 MMCNP228	MMCRP222 MMCRP228

RATCHET MOUNTS

	Ratchet Implant Driver Conical NP	Ratchet Implant Driver Conical RP	Ratchet Screw Driver Hex / Short	Ratchet Screw Driver Hex / Long	Ratchet Implant Driver Hex
Size	2.25mm	2.65mm	1.25mm	1.25mm	2.42mm
Length	13mm	13mm	7mm	15mm	13mm
Catalog No.	CDNP213	CDRP213	HXD107	HXD115	HXD213

OTHER TOOLS

Ratchet
WR

Torque Ratchet
TWR

Socket Wrench Driver
SCA635

Screw Driver
1.25mm | 10/15mm
HND10 HND15

Hand Wrench Hex
0.25mm
TWRCHT

Drill Stopper Kit

ESi/Premium Drills Kit

Dynamic/Ultimate Drills Kit

Instructions for Surgical Procedure .....

The following are instructions for usage of straight or angled abutment.

PLEASE READ THIS MANUAL THOROUGHLY BEFORE STARTING

2.1 Opening the Implant Package

STEP 1 Put on your gloves.

STEP 2 Open the blister package and remove the vial (Fig 1.0). The blister ensures the sterility of your SpiralTech implant. DO NOT open the blister until immediately prior to implant placement.

STEP 3 Remove outer cylinder cap (Fig 2.0 & 3.0). All SpiralTech implants are packed in a double vial for protection and sterility.

STEP 4 While holding the outer vial cylinder, remove the outer cap and gently slide out the inner tube containing the implant.

Fig 1.0

Fig 2.0

Fig 3.0

IMPORTANT

To maintain sterile conditions, SpiralTech implants SHOULD NOT BE taken out of the inner vial until ready to be placed into a prepared implant bed site.

STEP 5 Open the inner vial (Fig 4.0). Turn the vial counterclockwise direction, while gently pulling the white cap away (Fig 5.0).

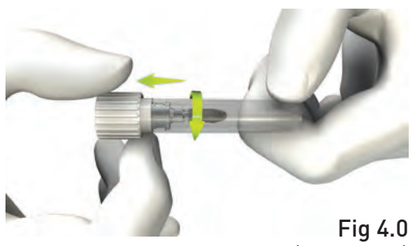


Fig 4.0
(Posterior)

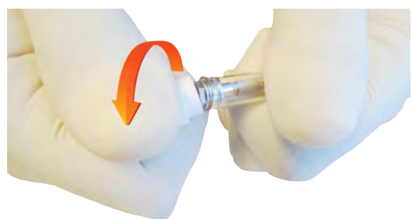


Fig 4.0a
(Anterior)

Fig 5.0

2.2. Performing initial implant placement and delivery using the carrier

Place the implant (Fig 6.0). After the gingiva has been opened and the implant bone bed site has been prepared with successive drilling steps (refer to pages 1013), proceed to the following:

- Enter implant to the site and rotate clockwise until reach ing a strong retension form.
- Pull white cap and carrier out of implant.
- For back teeth, snap away the white cap. Pull the carrier out of the white cap and use the carrier only.

  CAUTION: The cover screw is stored in the white cap.
- You can use the implant carrier instead of the wrench to finalize position.

PLEASE NOTE:
That above 50Ncm the Implant Carrier will deform to protect from bone fracture. Your Spiral-Tech implant carrier tip has been specifically designed to release the implant with minimal "pull off" pressure.

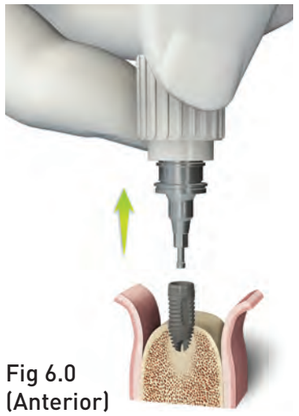


Fig 6.0
(Anterior)

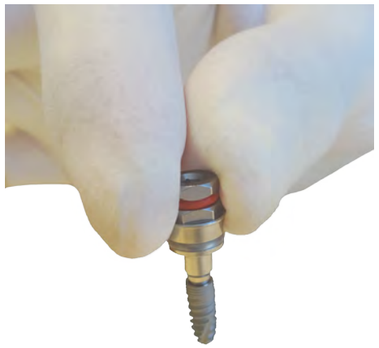


Fig 6.0a
(Posterior)

2.3. Choose Your Method of Delivery Technique (Three Options)

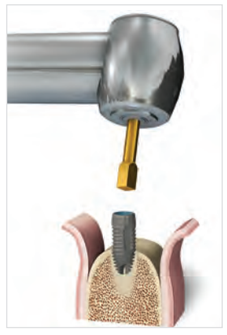
Final Implant Positioning

OPTION 1 The Rachet Technique

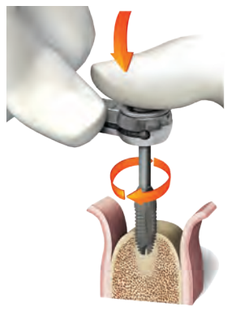
a. Select the Wrench from the Surgical Kit
b. Set the torque wrench 30Ncm
c. Rotate implant clockwise and position implant 0.5mm below bone crest

OPTION 2 The Hand Piece Technique

a. Select the Implant Driver from the Surgical Kit
b. Set Surgical Drill to 15RPM and 30Ncm
c. Position implant 0.5mm below bone crest



LEFT:
Ratchet Technique



RIGHT:
Hand PieceTechnique

OPTION 3 Utilization of Implant with Hand Piece

a. Set Surgical Drill to 15 RPM and 30Ncm
b. Hold vial in your hand and remove the white plastic cap by snapping away from implant carrier (Fig 7.0)
c. Engage implant driver to the implant carrier and slightly rotate and pull it away from vial, towards surgical site (Fig 8.0)
d. Position implant 0.5mm below bone crest (Fig 9.0)

Fig 7.0

Fig 8.0

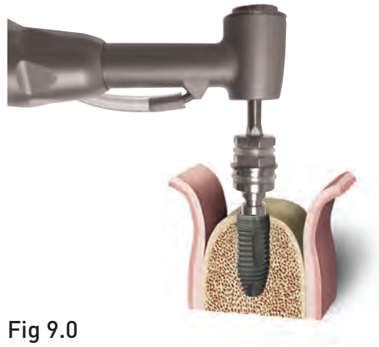


Fig 9.0

2.4. Soft Tissue Management Enclosure

After implantation, the implant is closed, hand-tightened—with an SpiralTech cover screw, healing cap or healing abutment to protect the implant. The surgeon can choose between:

OPTION 1 Submucosal Healing **OPTION 2** Transmucosal Healing

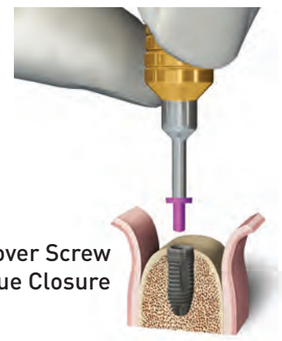
The surgeon has all options available for soft tissue management made possible through a set of secondary healing components.

OPTION 1 Submucosal Healing (Primary Closure)

a. Irrigate the area, confirm gingival crest are parallel to each other, permitting primary closure.
b. Place cover screws and sutures. Note that Submucosal Healing is suggested in esthetic indications and for implantations with simultaneous guided bone restoration (GBR) or membrane technique.
c. A second surgical procedure is required for uncovering the implant and insertion of the desired secondary component.

PLEASE NOTE:

Bone level cover screws are delivered sterile and ready to use. All other SpiralTech cover screws are delivered non-sterile and MUST BE STERILIZED prior to use.



Cover Screw
with Tissue Closure

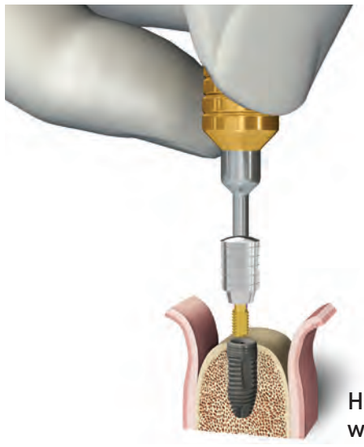
PLEASE NOTE:

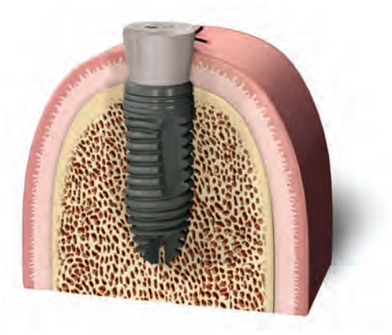
When the floor of the bone cavity is reached, there is a palpable increase in resistance. Avoid vertical position corrections using reverse (counter-clockwise) rotations. This can cause loosening of the transfer part and may lead to a decrease in primary stability.

OPTION 2 Transmucosal Healing

a. The non-epithelialized side of the flap should be approximated to the implant neck. Irrigate over and place healing abutment. Prepare gingiva crest to be semi-circular on each side in order of closure around healing abutment.
b. If necessary, this step must be combined with a gingivectomy. The wound margins are closed with atraumatic suture material, and the sutures must not be tied too tightly.
c. One relieving suture is placed on either side of the closure healing cap so that the wound margins are approximated without tension.

- Use of non-absorbable suture material is recommended. (e.g. Polyamide or Teflon)
- The sutures are removed after 7 to 10 days. A postoperative X-ray is recommended.

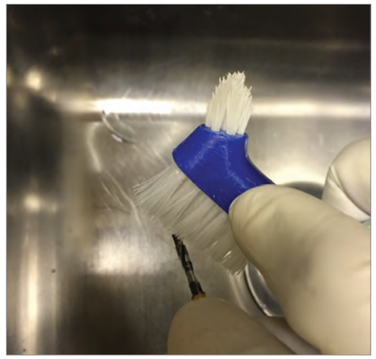




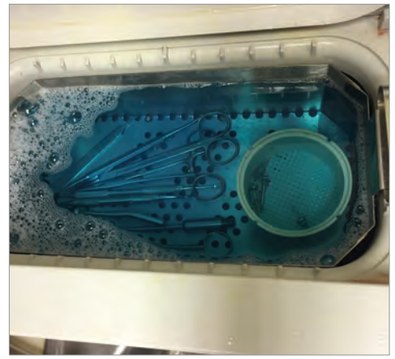
Healing Abutment
with Tissue Closure

CAUTION:

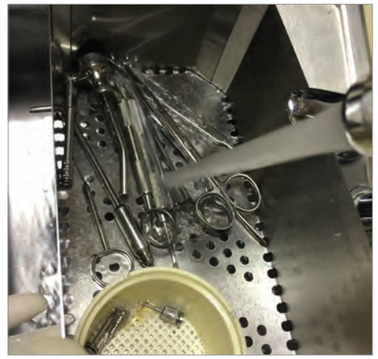
Insertion torque should not exceed 30Ncm. To prevent bone compression, perform a correct implant bed preparation. (As shown in pages 10 to 13) When reaching final drilling sequence and placement of implant in bone, use torque force; if you pass this range please evaluation depth and diameter of bone preparation and correct accordingly. SpiralTech implant carrier is designed to avoid higher torque than 65Ncm, should you cross that threshold it will not continue to turn the implant into the bone and carrier will collapse and the hex will strip and turn freely.



Check for debris blood clots or other particles on surgical instruments and drill bits. Then scrub instruments with a brush.



Place all surgical instruments and drill bits in ultra sonic.



Rinse all instruments with water and place in surgical container.

Place container in surgical container and place box in sterilzation bag.

Place surgical box and follow the table recommendation.

Sterilizer	Temperature	Pressure	Sterilized Time	Drying Time
Steam Autoclave	121°C (250°F)	15 psi	15 min	20 min
Unwrapped Items	132°C (270°F)	30 psi	3 min	20 min
Lightly Wrapped Items	132°C (270°F)	30 psi	8 min	20 min
Heavily Wrapped Items	132°C (270°F)	30 psi	10 min	20 min
Dry Heat Wrapped	170°C (340°F)	-	60 min	-
Dry Heat (Rapid Flow) Unwrapped Items	190°C (375°F)	-	6 min	-
Dry Heat (Rapid Flow) Packaged Items	190°C (375°F)	-	12 min	-

Refer to table recommended by ADA for sterilization as published by the JADA.

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