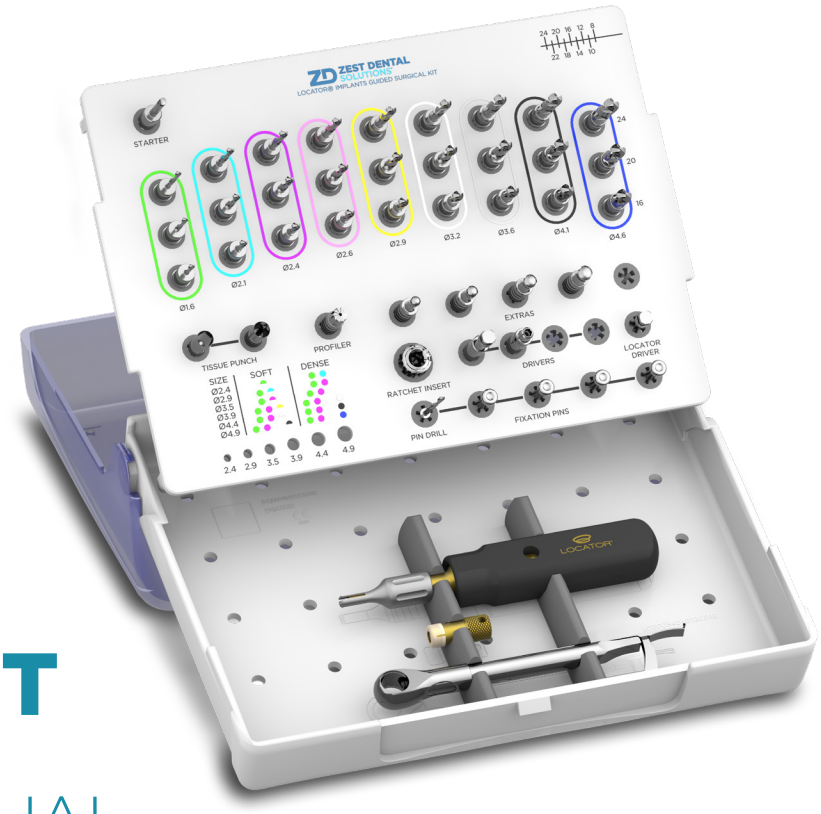
ZEST DENTAL SOLUTIONS®

LOCATOR®
IMPLANT SYSTEM



LOCATOR® GUIDED SURGICAL KIT

TECHNIQUE MANUAL

IMPORTANT: THIS DOCUMENT CONTAINS THE MOST CURRENT TECHNICAL GUIDELINES. PLEASE READ AND RETAIN.

TABLE OF CONTENTS

INTRODUCTION

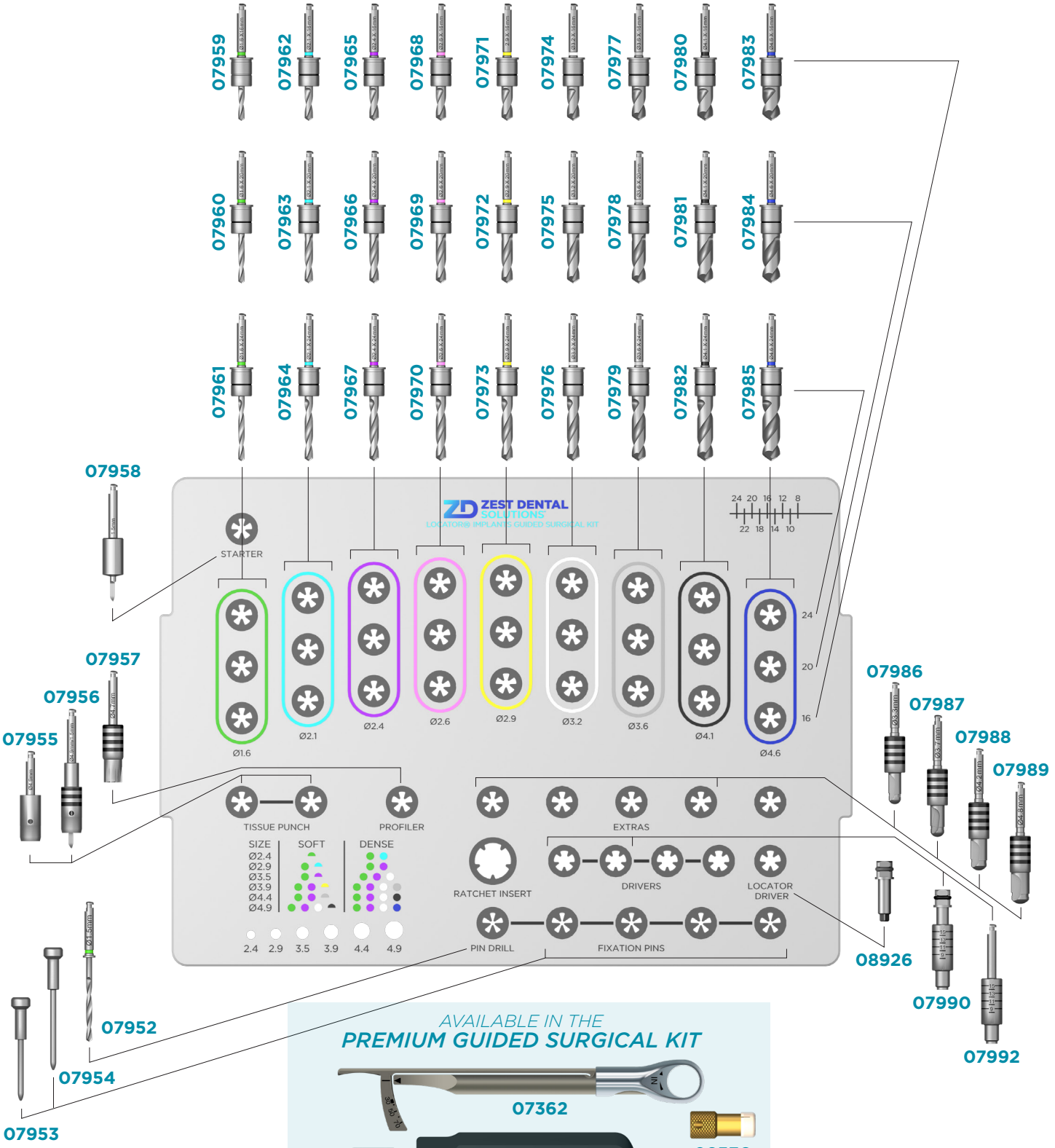
INTENDED USE

The LOCATOR Implant Guided Surgical Kit is intended to facilitate placement of the LOCATOR Implant System using a surgical guide and treatment planning to improve implant placement predictability for improved restoration outcomes in the mandible and maxilla.

LOCATOR IMPLANT GUIDED KIT

- All in one comprehensive fully guided surgical kit designed to be used with the trusted LOCATOR Implant System
- No keys/spoons required
- Single guide sleeve for straightforward surgical guide creation and surgical workflow
- Three drill length options (16, 20, 24mm) for improved surgical efficiency and treatment flexibility
- Compatible with all diameter and length implants of the LOCATOR Implant System
- Surgical instruments provided for multiple surgical access options

LOCATOR® IMPLANT SURGICAL KIT

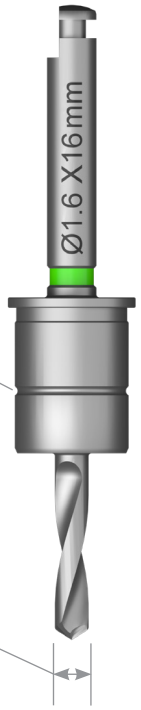


AVAILABLE IN THE

PREMIUM GUIDED SURGICAL KIT

GUIDED SURGERY INSTRUMENT DIMENSIONS

DRILL SCHEMATIC

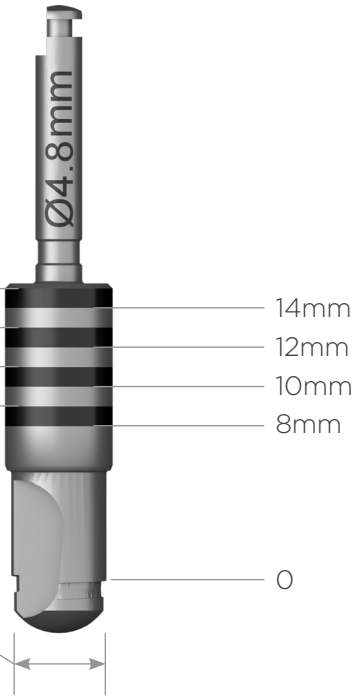


Soft Bone Protocol Lasermark:
Lasermark line denotes 4mm short of drill length value. To be used when following the soft bone drilling protocol

Drill length:
16, 20, 24mm lengths available

Diameter:
1.6, 2.1, 2.4, 2.6, 2.9, 3.2, 3.6, 4.1, 4.6mm sizes available

CORTICAL DRILL SCHEMATIC - DRILL LENGTH OF CORTICAL DRILL
(OPTIONAL INSTRUMENT)



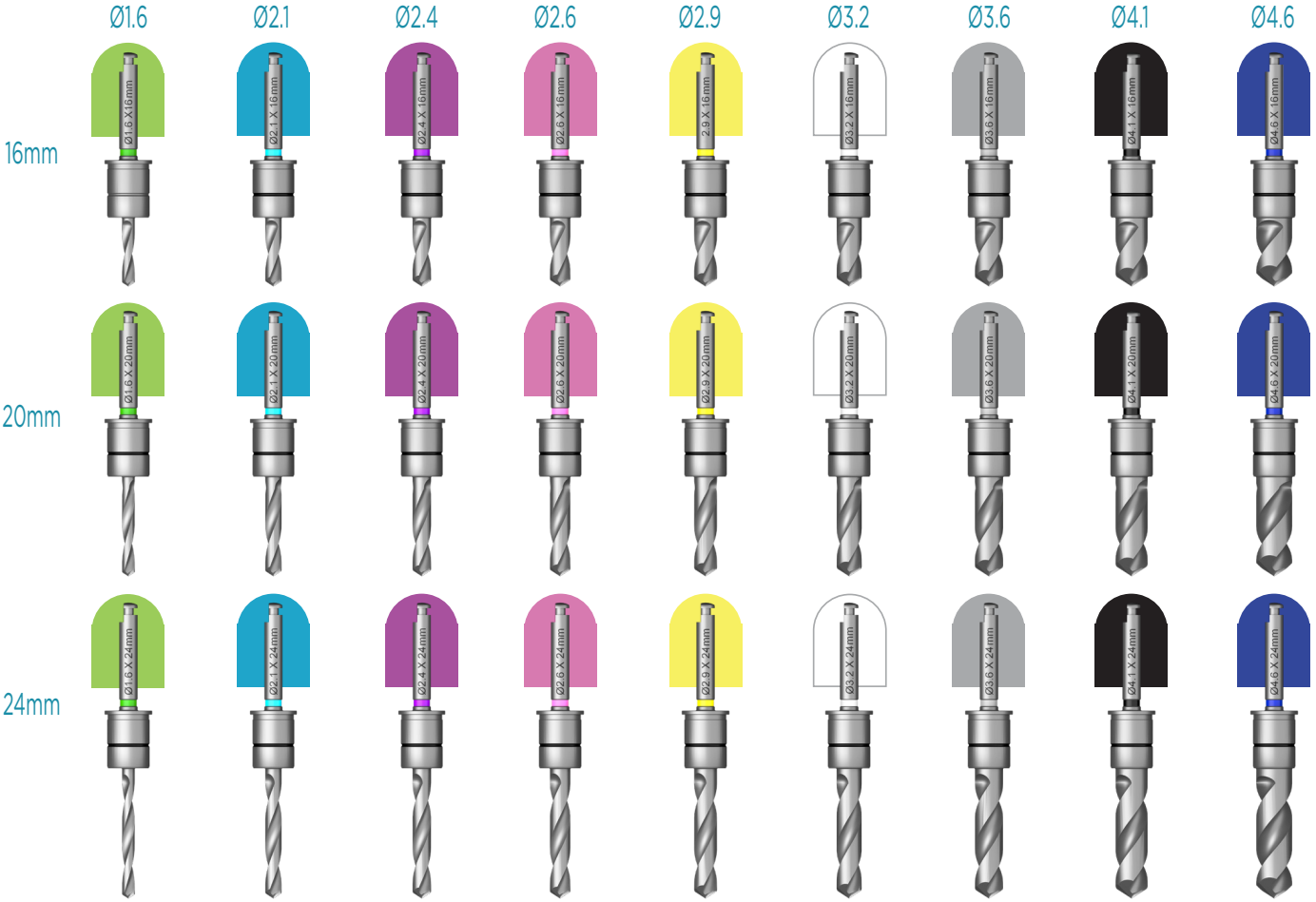
Diameter:
3.3, 3.7, 4.2, 4.8mm sizes available

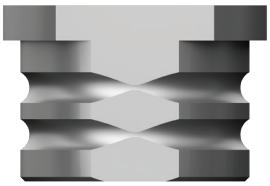
DRIVER SCHEMATIC

DRIVER LASER MARKS indicate implant offset not implant length. Refer to drill report for instructions OR calculate.
Implant offset = Drill length- implant length

GUIDED SURGERY INSTRUMENT DIMENSIONS CONT.

DRILL COLOR CODES





GUIDED SLEEVES (07950)

Shoulder Diameter .295" or 7.5mm
Body Diameter .256" or 6.5mm
Overall Length .197" or 5mm
Shoulder Height .039" or 1mm
Flat to Flat Width .236" or 6mm

FIXATION PIN SLEEVES (07951)

Outer Diameter of .117" or 3mm
Length of .433" or 11 mm

CLEANING AND STERILIZATION

The LOCATOR Guided Surgical Kit, including the surgical tray and instruments, are supplied non-sterile. Tools and instruments should be sterilized prior to use on patients following the instructions for use. See IFU L9169-ZD.

ORDERING INFORMATION

2.4mm

Part	Length	Cuff
07450	10mm	2.5mm
07451	12mm	2.5mm
07452	14mm	2.5mm
07440	10mm	3mm
07441	12mm	3mm
07442	14mm	3mm
07455	10mm	4mm
07456	12mm	4mm
07457	14mm	4mm
07432	10mm	5mm
07433	12mm	5mm
07434	14mm	5mm
07381	10mm	Implant Only
07382	12mm	Implant Only
07383	14mm	Implant Only

2.9mm

Part	Length	Cuff
07460	10mm	2.5mm
07461	12mm	2.5mm
07462	14mm	2.5mm
07443	10mm	3mm
07444	12mm	3mm
07445	14mm	3mm
07465	10mm	4mm
07466	12mm	4mm
07467	14mm	4mm
07435	10mm	5mm
07436	12mm	5mm
07437	14mm	5mm
07386	10mm	Implant Only
07387	12mm	Implant Only
07388	14mm	Implant Only

3.5mm

Part	Length	Cuff
07501-02	8mm	2.5mm
07502-02	10mm	2.5mm
07503-02	12mm	2.5mm
07504-02	14mm	2.5mm
07501-03	8mm	3mm
07502-03	10mm	3mm
07503-03	12mm	3mm
07504-03	14mm	3mm
07501-04	8mm	4mm
07502-04	10mm	4mm
07503-04	12mm	4mm
07504-04	14mm	4mm
07501-05	8mm	5mm
07502-05	10mm	5mm
07503-05	12mm	5mm
07504-05	14mm	5mm
07501	8mm	Implant Only
07502	10mm	Implant Only
07503	12mm	Implant Only
07504	14mm	Implant Only

ALL-INCLUSIVE PACKAGE

1 Implant
1 LOCATOR® Abutment
1 Processing Pack

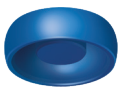
Each Processing Pack has what you need to select retention levels and address draw correction; improving ease of denture placement and removal

ORDERING INFORMATION CONT.

3.9mm			4.4mm			4.9mm		
Part	**Length**	**Cuff**	**Part**	**Length**	**Cuff**	**Part**	**Length**	**Cuff**
07505-02	8mm	2.5mm	07509-02	8mm	2.5mm	07513-02	8mm	2.5mm
07506-02	10mm	2.5mm	07510-02	10mm	2.5mm	07514-02	10mm	2.5mm
07507-02	12mm	2.5mm	07511-02	12mm	2.5mm	07515-02	12mm	2.5mm
07508-02	14mm	2.5mm	07512-02	14mm	2.5mm	07516-02	14mm	2.5mm
07505-03	8mm	3mm	07509-03	8mm	3mm	07513-03	8mm	3mm
07506-03	10mm	3mm	07510-03	10mm	3mm	07514-03	10mm	3mm
07507-03	12mm	3mm	07511-03	12mm	3mm	07515-03	12mm	3mm
07508-03	14mm	3mm	07512-03	14mm	3mm	07516-03	14mm	3mm
07505-04	8mm	4mm	07509-04	8mm	4mm	07513-04	8mm	4mm
07506-04	10mm	4mm	07510-04	10mm	4mm	07514-04	10mm	4mm
07507-04	12mm	4mm	07511-04	12mm	4mm	07515-04	12mm	4mm
07508-04	14mm	4mm	07512-04	14mm	4mm	07516-04	14mm	4mm
07505-05	8mm	5mm	07509-05	8mm	5mm	07513-05	8mm	5mm
07506-05	10mm	5mm	07510-05	10mm	5mm	07514-05	10mm	5mm
07507-05	12mm	5mm	07511-05	12mm	5mm	07515-05	12mm	5mm
07508-05	14mm	5mm	07512-05	14mm	5mm	07516-05	14mm	5mm
07505	8mm	Implant Only	07509	8mm	Implant Only	07513	8mm	Implant Only
07506	10mm	Implant Only	07510	10mm	Implant Only	07514	10mm	Implant Only
07507	12mm	Implant Only	07511	12mm	Implant Only	07515	12mm	Implant Only
07508	14mm	Implant Only	07512	14mm	Implant Only	07516	14mm	Implant Only

PROCESSING PACK

Denture Housing



Blue Standard Range Insert Low Retention

Pink Standard Range Insert Medium Retention

Red Extended Range Insert Low Retention

Block-Out Spacer

SOFTWARE COMPATIBILITY

The LOCATOR Guided Surgical Kit requires access to a compatible planning software, CT scan (CBCT), and optical scan information.

Now Available

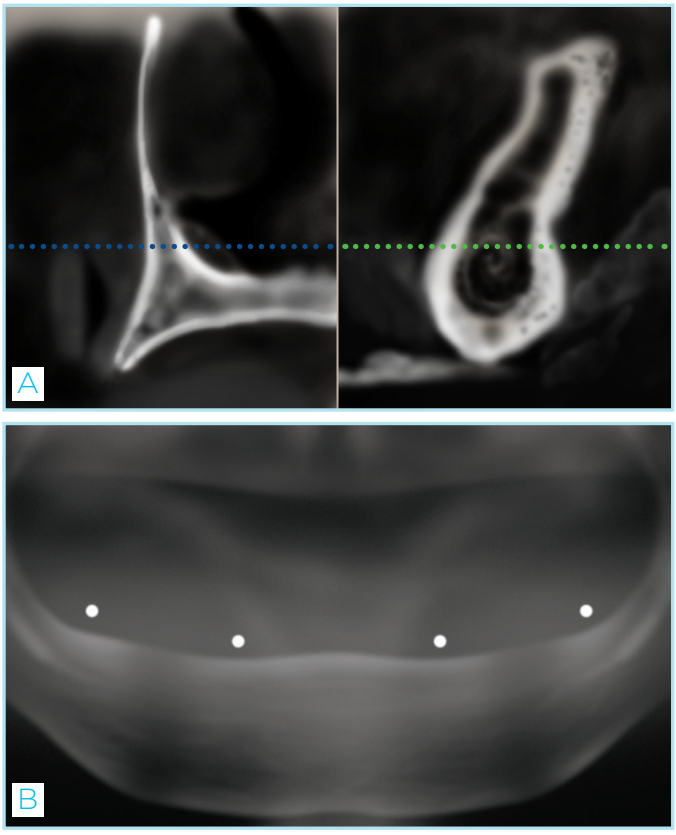
exoplan
Implant Studio
RealGUIDE
Blue Sky Plan
coDiagnostiX

Use of software not listed above for guide fabrication is not recommended.

TREATMENT PLANNING

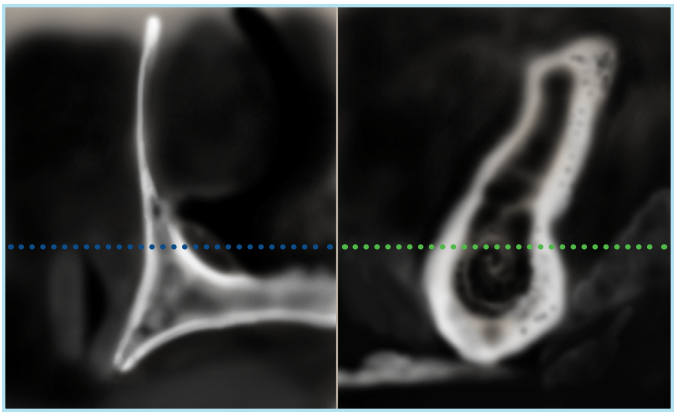
The following steps may be required ahead of case planning and surgical guide creation. These steps may vary depending on planning software being used:

- Patient exam
- Digital data
  - CBCT
  - Intraoral
  - Images (photographs)
- Patient prescription creation
- Partially edentulous vs Fully edentulous
- Create 3D treatment plan
- Implant planning following prescription and clinician approval of plan
- Guide design – following approval from clinician, the surgical guide is designed
- Surgical Guide manufacturing – 3D print technology, follow manufacturer's 3D printed surgical guide guideline.
  - Insert guide sleeves into the surgical guide until fully seated



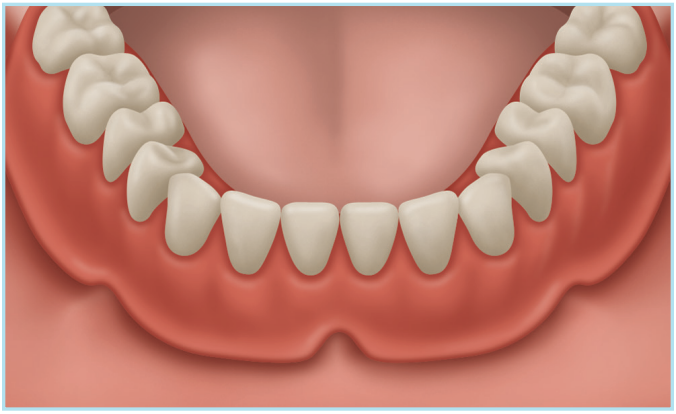
1A-1B A panoramic radiograph or CBCT with radiographic markers may be used to evaluate the bone topography and determine the appropriate implant positions.

TREATMENT PLANNING CONT.

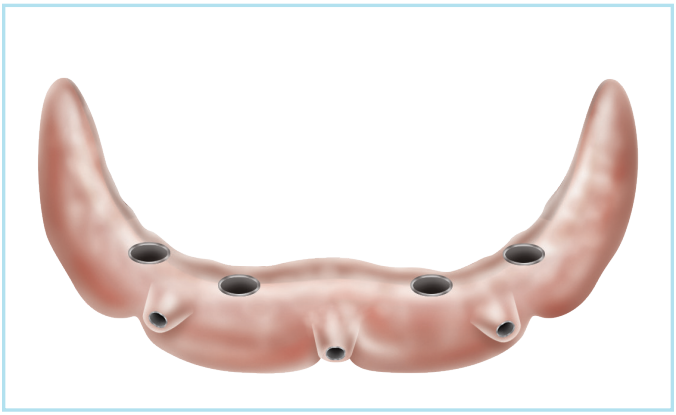


2 Choose the appropriate implant size for the patient. Zest recommends placement of the LOCATOR® Implants where patients have at least 1mm of available bone around the circumference of the implant.

TIP: Digital implant libraries are available. For more information, contact a Zest Dental Solutions representative or visit www.zestdent.com.



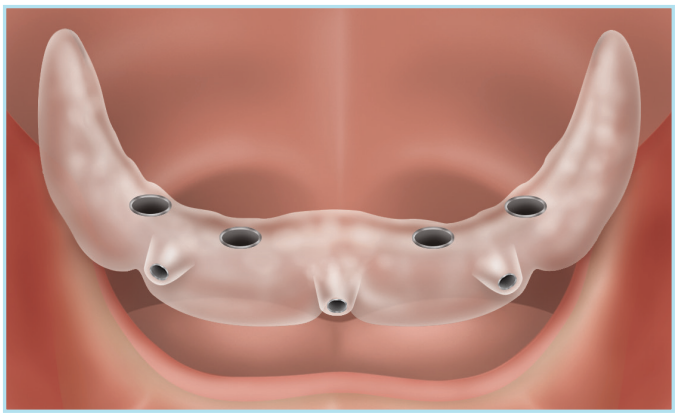
3 Determine if the patient's existing prosthesis will be used or if a new appliance will be fabricated. If a new prosthesis is fabricated, follow standard clinical fabrication protocols.



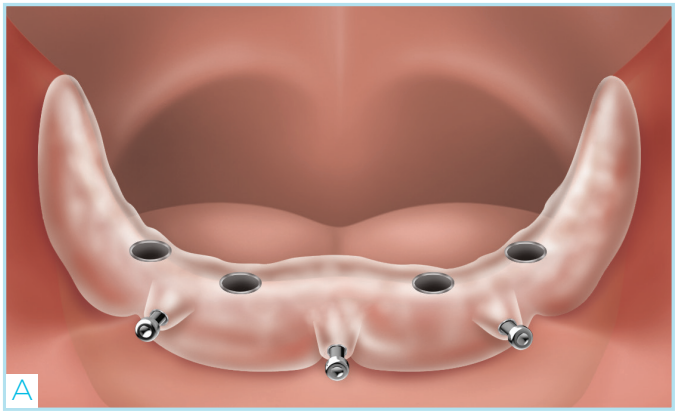
4 A surgical guide for implant placement should be fabricated prior to surgery.

NOTE: Please check with manufacturer of surgical guide for sterilization techniques.

SEATING THE SURGICAL GUIDE WITH FIXATION PINS

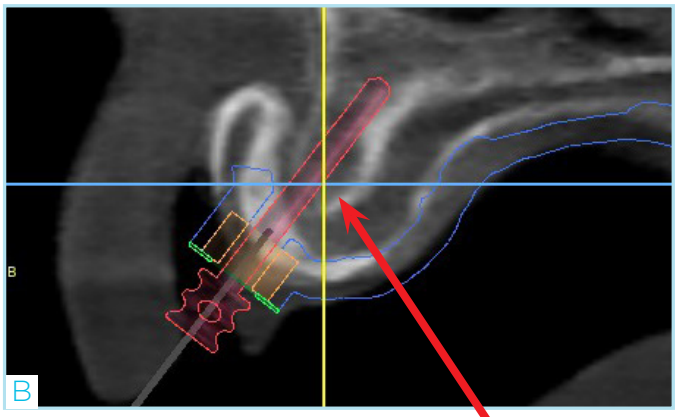


1 Seat the guide into the patient's mouth without excessive force. Ensure the guide fully seats onto the patient's anatomy.

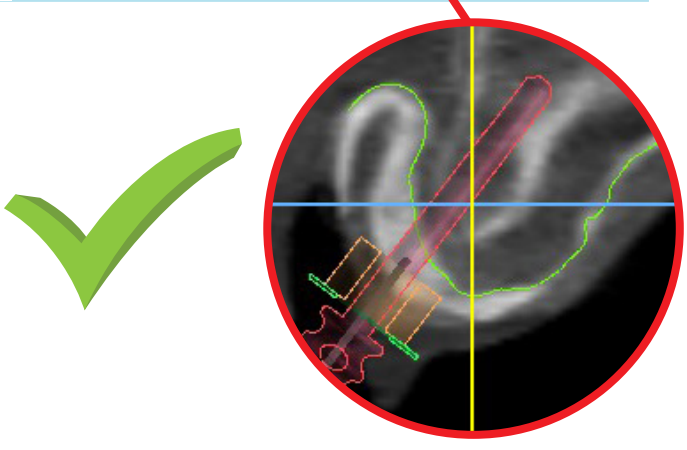


2A-2B While ensuring surgical guide is completely adapted, prepare guide pin osteotomies using guide pin sleeves and corresponding guide pin drill. Recommended 600-800 rpm.

It is recommended to use the provided Guided Fixation Pins for optimal surgical guide stability. The Guided Fixation Pins are used to anchor the surgical guide in place. 2-4 Guided Fixation Pins are recommended in order to gain stable support and proper repositioning of the surgical guide during the procedure.



Guided Fixation Pins should ideally be placed in keratinized tissue with stabilization provided by native bone. Ensure the Guided Fixation Pins are embedded in sufficient bone. This should be taken into account during the surgical guide planning as a Guided Fixation Pin sleeve and Drill are provided to create accurate positioning and depth.



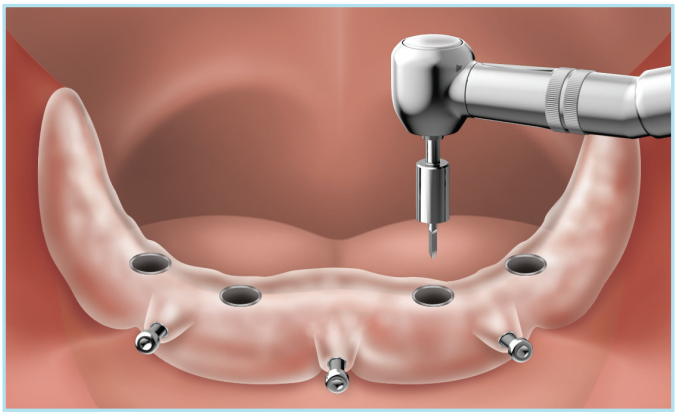
OPTIONS FOR SURGICAL ACCESS

Incision & Flap Elevation

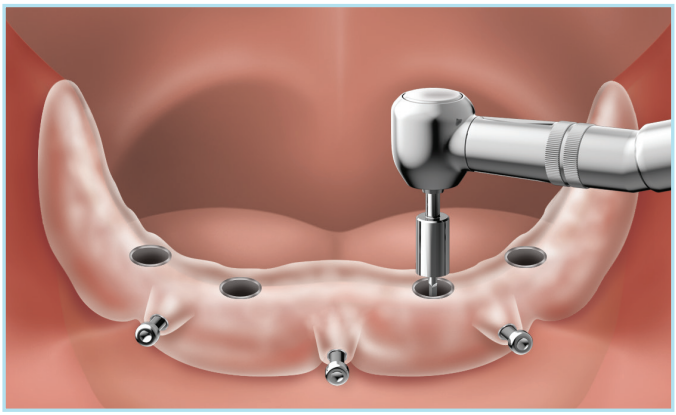
Tissue Punch

Tissue Punch/Starter Drill:
Combination surgical approach and creating initial osteotomy

CREATING INITIAL OSTEOTOMY

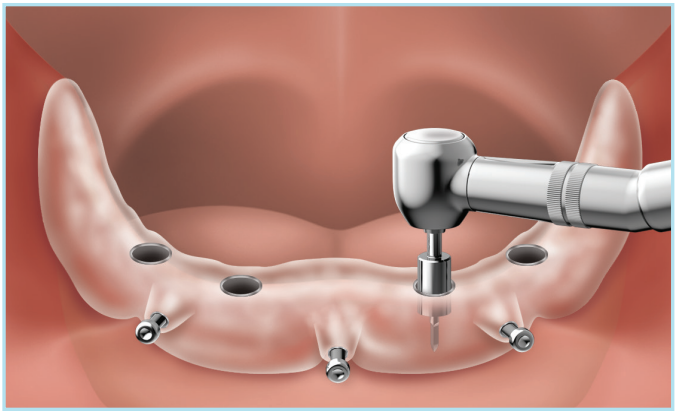


1 After the surgical approach is selected and began, place the starter drill into the dental handpiece and feed the starter drill tip and hub into the surgical guide. (If using the Tissue Punch/Starter Drill Combo instrument begin at step 4A)

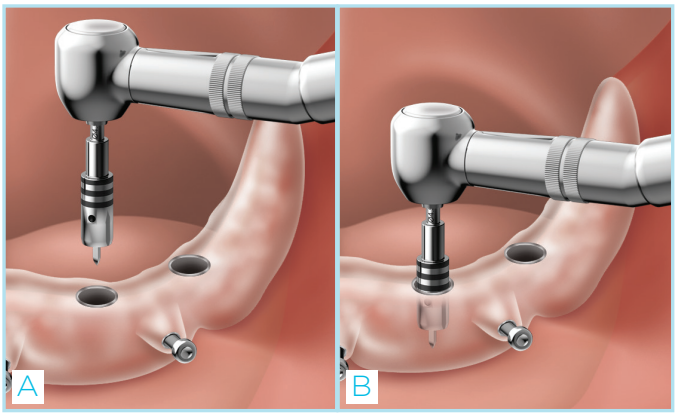


2 When the starter drill hub is engaged within the surgical guide and guided sleeve, drill with a drilling speed of 800-1200rpm until the starter drill reaches it's physical stop and cannot be advanced any further.

CREATING INITIAL OSTEOTOMY CONT.



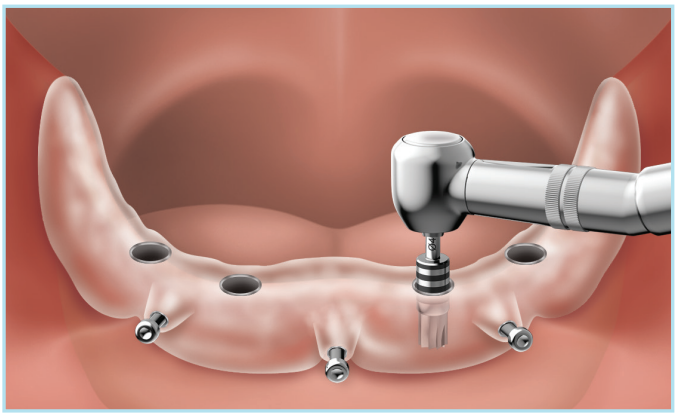
3 When drilled to full depth the starter drill creates an osteotomy depth of 6.5mm.



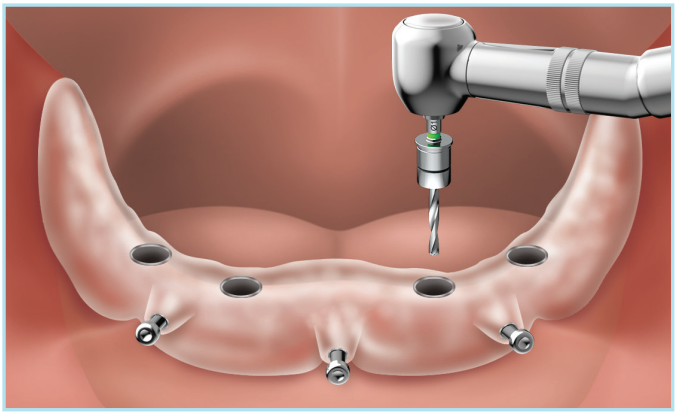
4A-4B Choices: Tissue Punch OR Tissue Punch/ Starter Drill may be used with Tissue Borne Guide.

After guide placement, place instrument into the surgical guide sleeve (Combo Drill Shown).

When the instrument is engaged with the surgical guide and guided sleeve, drill with a drilling speed of 800-1200rpm until the tissue punch reached the depth of the bone. If using traditional tissue punch 200-500 rpm is recommended.



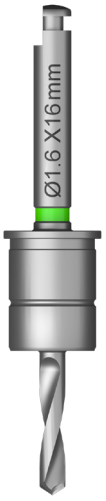
5 When fully bottomed out onto the bone, the starter drill creates an osteotomy depth of 4mm.



6 After the initial osteotomy is created, refer to the planning software report indicating the required length drills to be used for the implant osteotomy. Drill diameters are used sequentially per the drill protocol table (below) until the appropriate final diameter osteotomy is created. For dense bone situations, each drill will be fully bottomed out within the surgical guide. For soft bone situations, stop the final drill at the soft bone protocol line on the surgical drill.

DRILLING PROTOCOL

Soft Bone Protocol Lasermark: Lasermark line denotes 4mm short of Drill Length/ prolongation value. To be used when following the soft bone drilling protocol



IMPLANT DIAMETER	BONE DENSITY	DRILLS										CORTICAL DRILLS			
		STARTER	1.6	2.1	2.4	2.6	2.9	3.2	3.6	4.1	4.6	3.3	3.7	4.2	4.7
Ø2.4mm	D1	0	●	●	0										
	D2, D3, D4	0	◗	0											
Ø2.9mm	D1	0	●		●	0									
	D2, D3, D4	0	●	◗	0										
Ø3.5mm	D1	0	●		●			○				0			
	D2, D3, D4	0	●		◗	0									
Ø3.9mm	D1	0	●		●				●				0		
	D2, D3, D4	0	●		●		◗								
Ø4.4mm	D1	0	●		●			○		●				0	
	D2, D3, D4	0	●		●				◗	0					
Ø4.9mm	D1	0	●		●			○			●				0
	D2, D3, D4	0	●		●			○		◗	0				

● Full Circle
Drill to full implant length.

◗ Half Circle
Drill 4mm short of implant length.

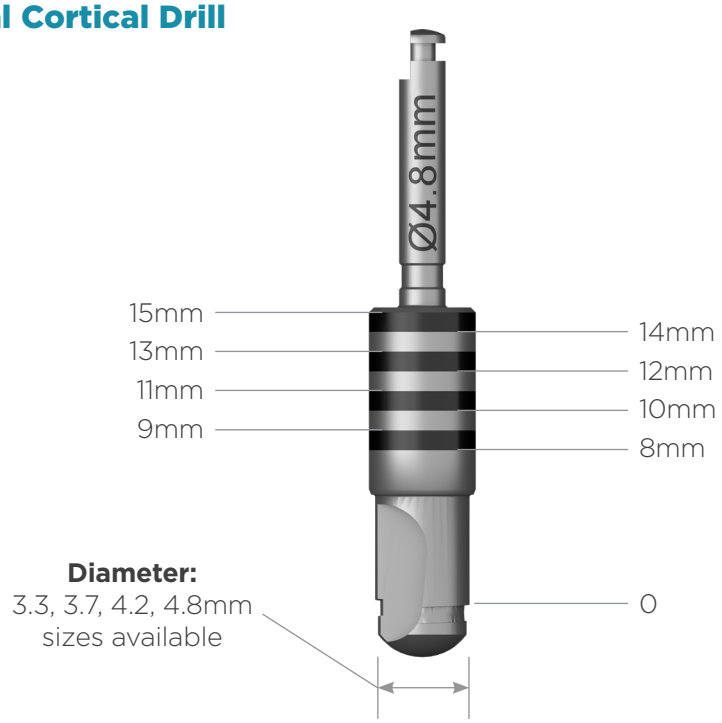
0 Small Oval
Optional Drill

OPTIONAL CORTICAL DRILL & IMPLANT OFFSET

Optional Cortical Drill

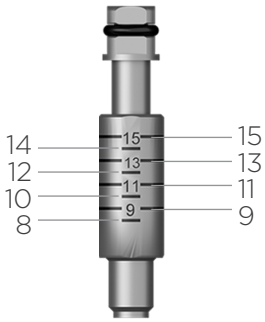
If strong resistance occurs before the implant reaches its final desired position, rotate the implant counterclockwise and then continue to insert. Repeat until the final desired position is obtained. The next drill size up or cortical drill (if available) may also be used if strong resistance occurs before the implant reaches its final desired position.

When using the cortical drill, it is recommended to remove 2-4mm of the cortical shell to reduce the implant resistance.

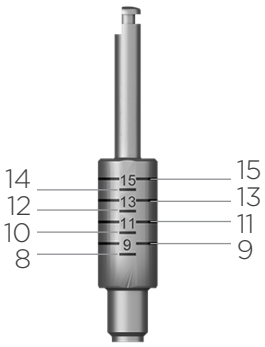


IMPLANT OFFSET/GUIDED IMPLANT DRIVER

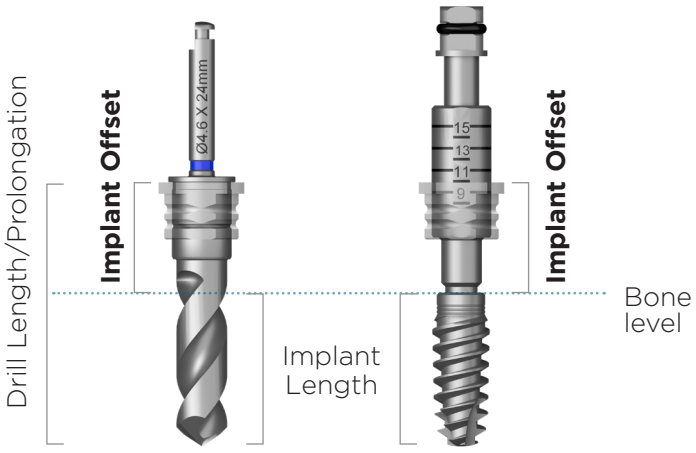
Calculating Implant Offset



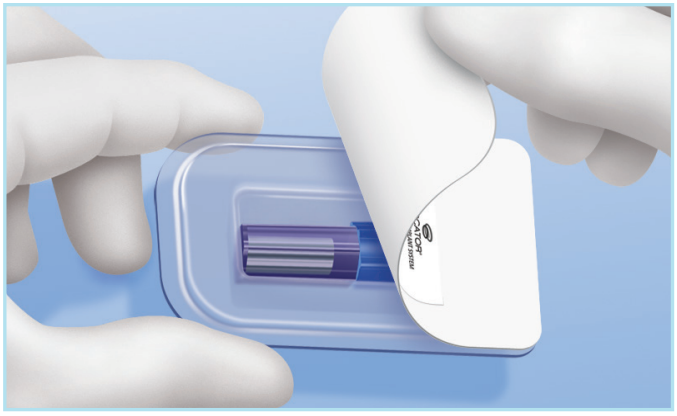
IMPLANT LENGTH (MM)	Drill Length (Prolongation)		
	16	**20**	**24**
8	**8**	**12**	**16**
10	**X**	**10**	**14**
12	**X**	**8**	**12**
14	**X**	**X**	**10**



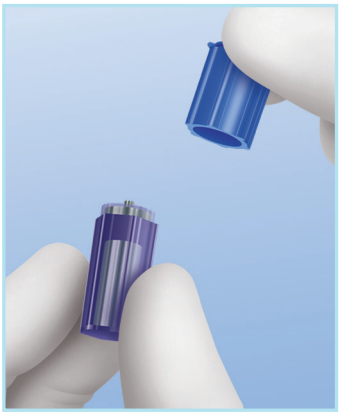
Distance from Sleeve to implant/bone (Implant Offset)
Implant Offset = Drill Length (Prolongation) - Implant Length



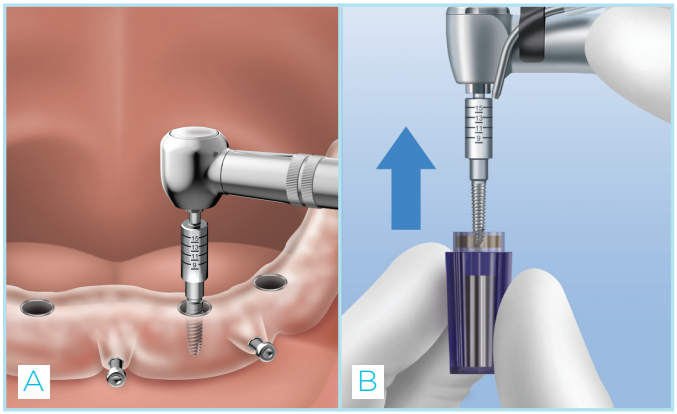
IMPLANT DELIVERY WITH GUIDED IMPLANT DRIVER



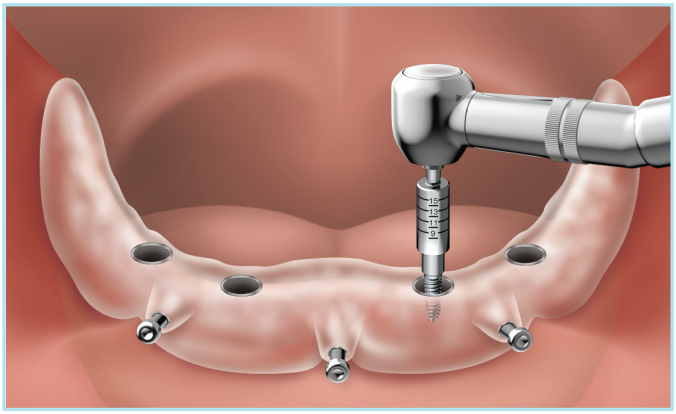
1 Remove the implant package from the box and peel back the seal from the plastic tray.



2 Remove the Housing from the implant vial and do not discard. The LOCATOR® Abutment is included in the Housing. Place the sterile implant vial on the sterile surgical tray. The contents of the plastic tray are sterile and should only contact components within the sterile field.



3A-3B Remove the Housing from the implant vial and do not discard. The LOCATOR® Abutment is included in the Housing. Set the drilling unit speed at 30rpm and the placement torque at 35Ncm. Place the Guided Implant Latch Driver in the handpiece. Seat it onto the hex on the top of the implant and press down to engage securely. The bottom of the driver should contact the abutment seating surface and fully engage the entire length of the implant hex.

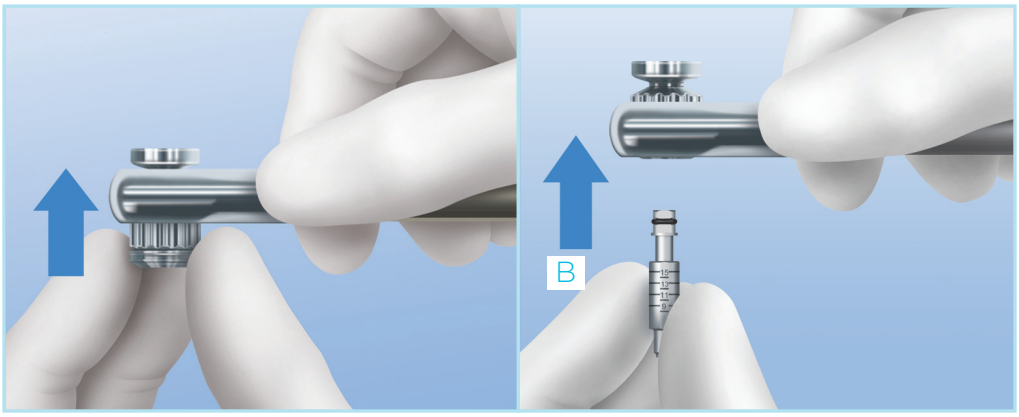


4 Refer to provided report from approved guide planning software plan prior to placing implant. The planning guide report will indicate the offset or drill length value to use while placing the implant.

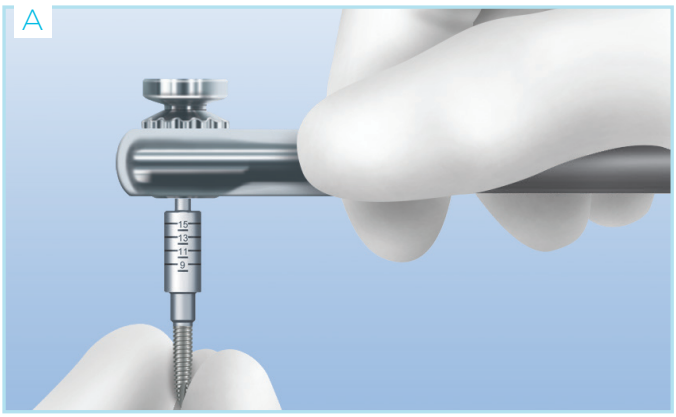
Note, numbers on implant placement drivers DO NOT CORRESPOND TO IMPLANT LENGTH. This number is a measurement provided by your dental technician who has planned your case and designed the surgical guide.

The lines and number on the driver indicates implant insertion depth and/or countersink depth. This number matches the drill length /implant offset value (drill length /prolongation - implant length) provided by your technician.

**DO NOT PLACE IMPLANTS BEYOND THE OFFSET DEPTH. The guided implant driver does not have a physical stop and relies upon the clinician placing at the line offset depth prescribed by the technician.

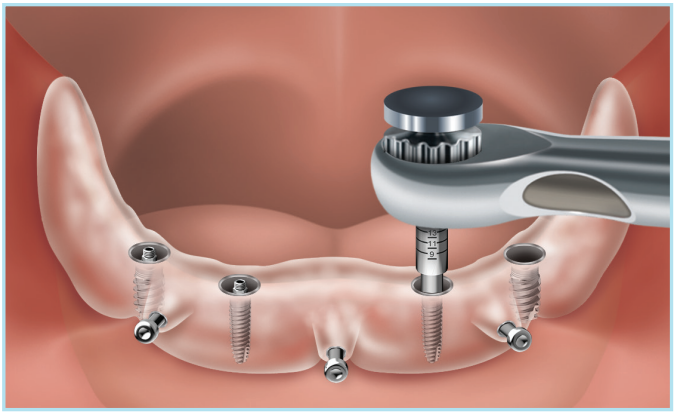


5A-5C For final insertion, use the Guided Manual Implant Driver with the Torque Indicating Ratchet Wrench. Assemble the Ratchet Insert and the Torque Indicating Ratchet Wrench (07362) to finalize seating.

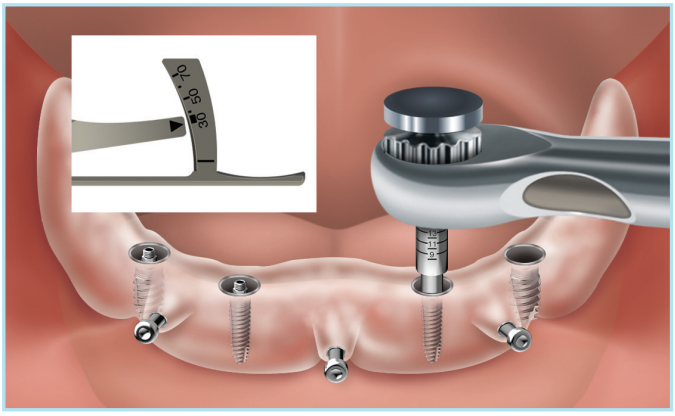


C Carry the implant to the mouth, place it into the osteotomy and insert at 30rpm. Use the Guided Implant Latch Driver to drive the implant three quarters (3/4) of the way into the osteotomy.

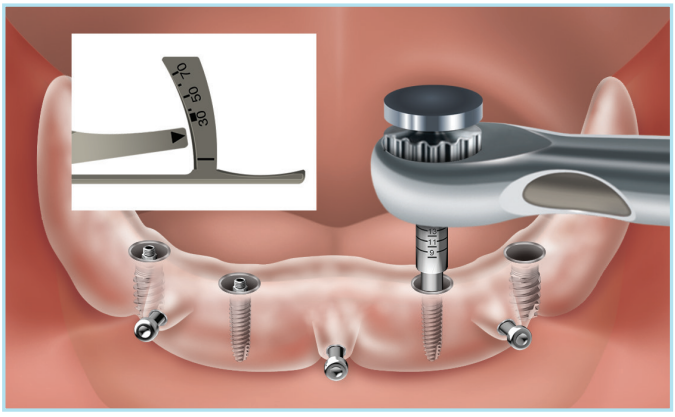
IMPLANT DELIVERY WITH GUIDED IMPLANT DRIVER



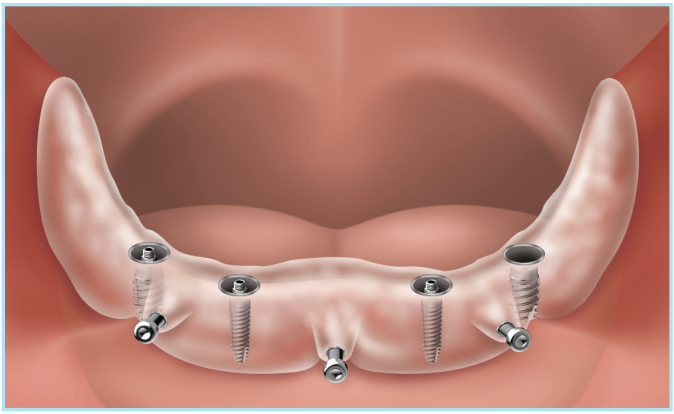
7 Engage the Guided Manual Implant Driver onto the hex of the top of the implant through the Sleeve and verify that it is fully engaged.
Using the flexible arm of the Ratchet Wrench, drive the implant further until the the number of the line on the Driver matches the number prescribed from the technician who planned the case and designed the surgical guide.
Note: This number is often referred to as Prolongation or Implant Offset and is calculated by Drilling Length - Implant Length.
DO NOT PLACE IMPLANTS BEYOND THE PROLONGATION / OFFSET NUMBER PROVIDED BY YOUR TECHNICIAN
If strong resistance occurs before the implant reaches its final desired position, you may remove the implant and utilize the next drill size up to enlarge the osteotomy.



8 If final seating torque measures 30Ncm or above, the implant may be placed into immediate function at the discretion of the clinician, with the patient adhering to recommended post-surgical hygiene and care protocols.



9 If the final seating torque measures below 30Ncm, relieve the overdenture acrylic and place a soft liner in the overdenture around the LOCATOR® Abutments during the implant integration period. If 70Ncm of torque is reached prior to full seating, rotate the implant counterclockwise and then continue to insert. Alternatively, remove implant and use optional cortical drills to reduce the implant resistance during placement.



10 Follow standard restorative techniques. Refer to the LOCATOR Implants Technique manual for placement of abutment and pick up of overdenture housings.

TIP: Do not use an implant that comes into contact with any non-sterile area. Replace with a new sterile implant.

NOTES

NOTES

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ZD ZEST DENTAL SOLUTIONS®

ZEST DENTAL SOLUTIONS
2875 LOKER AVENUE EAST
CARLSBAD, CA 92010
USA

TEL: 1.855.866.LODI (5934)
FAX: 760.743.7975
EMAIL: SALES@ZESTDENT.COM
WWW.ZESTDENT.COM

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