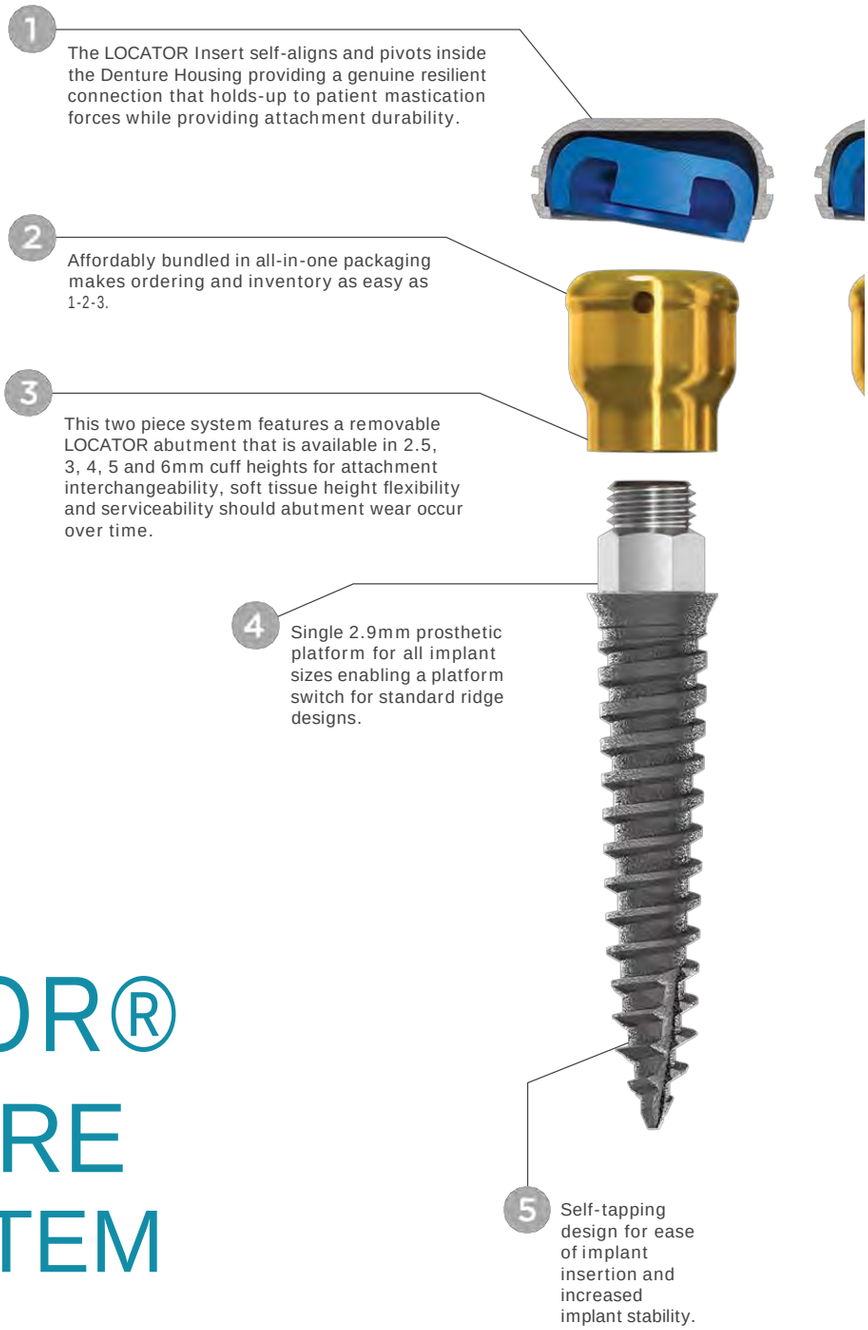
ZEST DENTAL SOLUTIONS®

LOCATOR®
OVERDENTURE IMPLANT SYSTEM

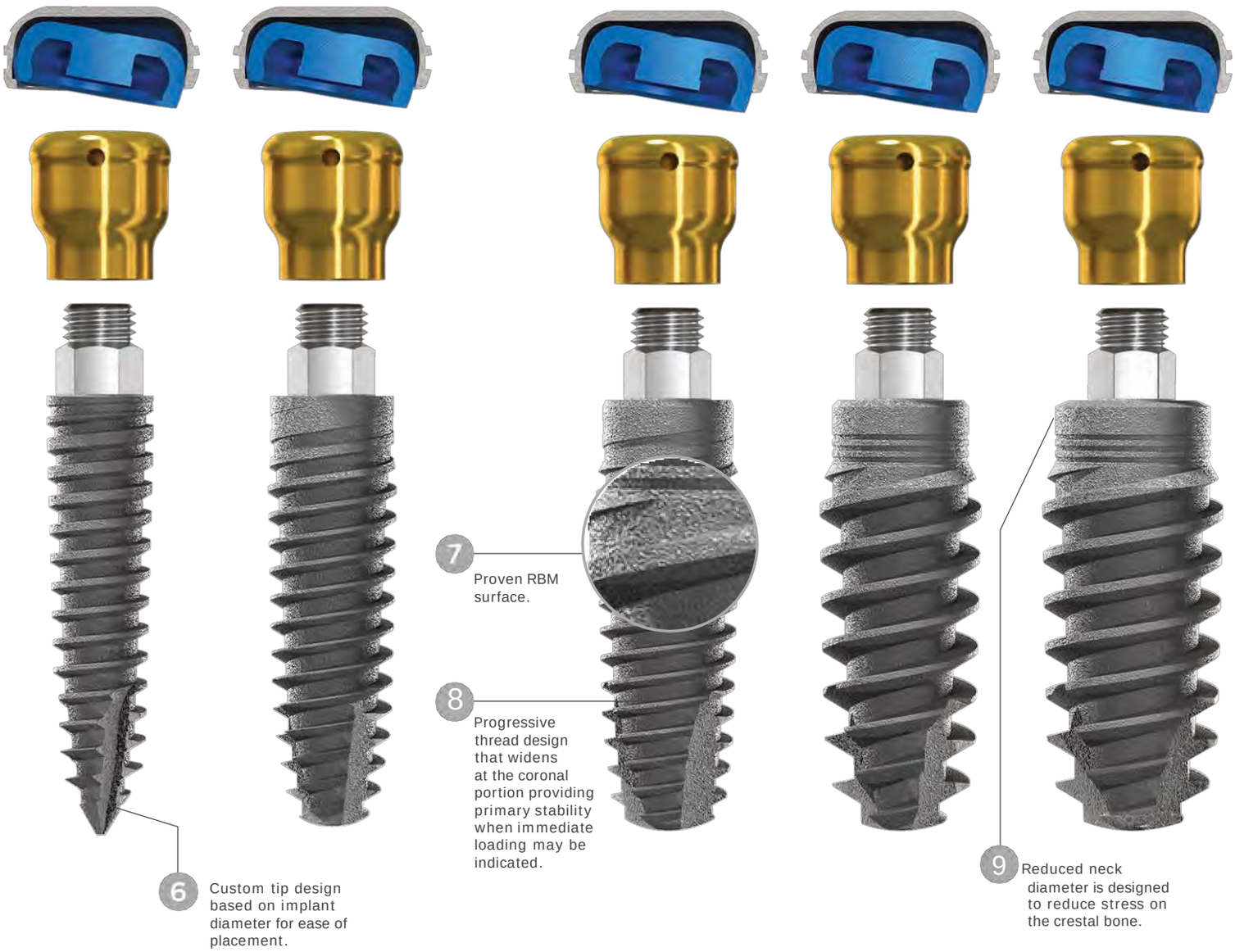
LOCATOR® OVERDENTURE IMPLANT SYSTEM

TECHNIQUE MANUAL



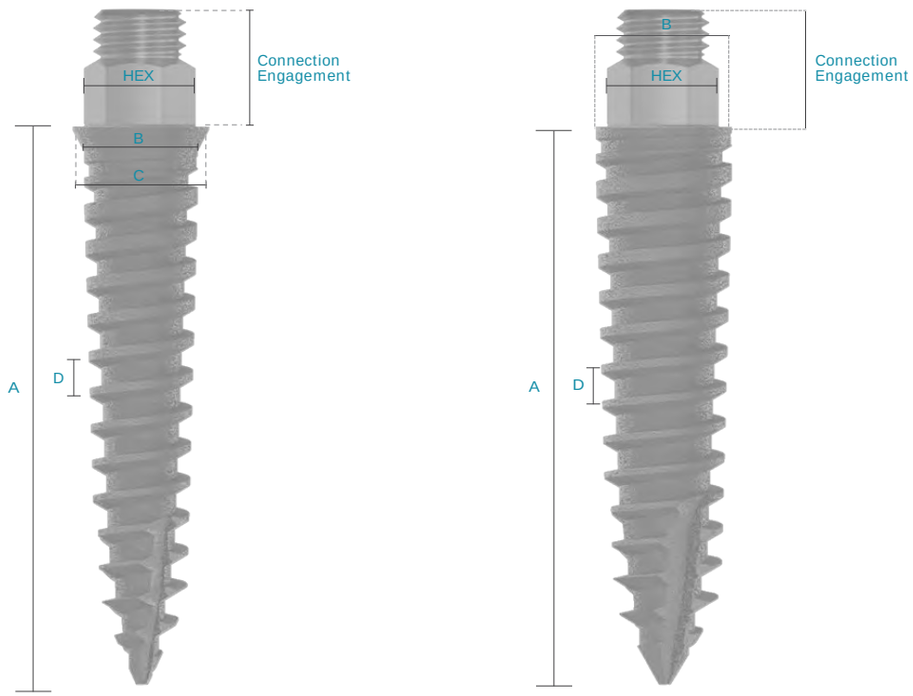
THE LOCATOR® OVERDENTURE IMPLANT SYSTEM

Four decades of overdenture attachment knowledge now in overdenture implants.



The LOCATOR Overdenture Implant System is comprised of 2.4, 2.9, 3.5, 3.9, 4.4 and 4.9mm diameter dental implants (available in 8, 10, 12 and 14mm lengths) with a detachable LOCATOR Abutment that is available in a 2.5, 3, 4, 5, or 6mm cuff height. LOCATOR Implants are used to restore masticatory function for the patient and may be suitable for immediate load if sufficient primary stability of the implant is achieved at the time of placement. The final treatment option may be determined at the time of surgery as the clinician must consider the quality of supporting bone and initial insertion torque values of the implants. Immediate function is determined on a case-by-case basis and at the discretion of the clinician.

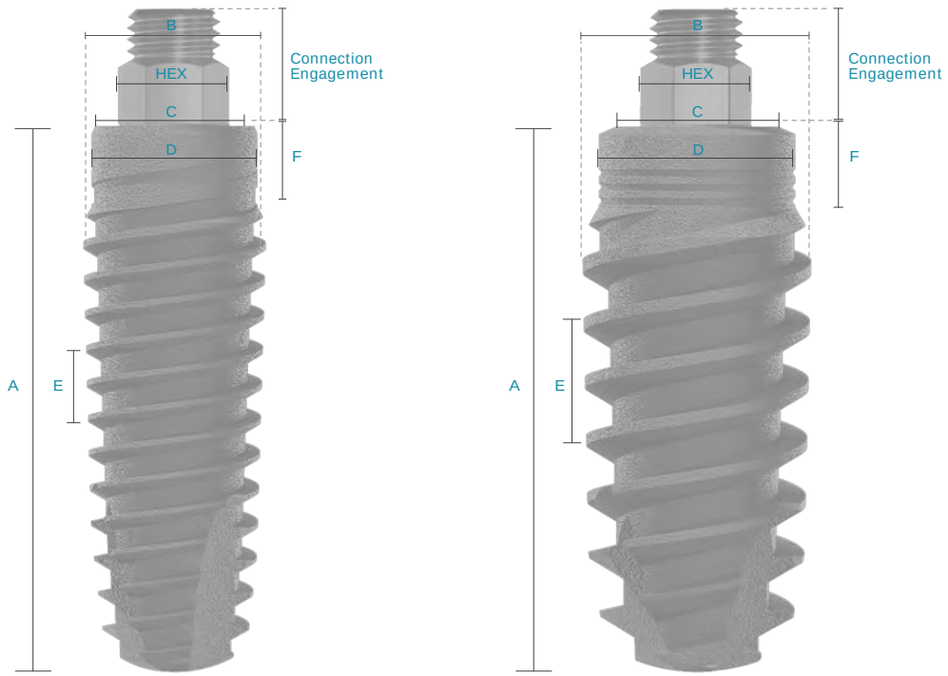
LOCATOR® IMPLANT SYSTEM DIMENSIONS



	A	B	C	D		
Part Number	Length	Diameter	Platform	Single Lead Thread Pitch	Hex	Connection Engagement
07341	10mm	2.4mm	2.9mm	0.79mm	2.11mm	2.51mm
07342	12mm	2.4mm	2.9mm	0.79mm		
07343	14mm	2.4mm	2.9mm	0.79mm		
07346	10mm	2.9mm	2.9mm	0.79mm		
07347	12mm	2.9mm	2.9mm	0.79mm		
07348	14mm	2.9mm	2.9mm	0.79mm		

NOTE Single 2.9mm prosthetic platform fits all implants. Zest recommends 7mm between implants.

LOCATOR® IMPLANT SYSTEM DIMENSIONS CONT.



	A	B	C	D	E	F		
Part Number	Length	Diameter	Platform	Reduced Neck Diameter	Dual Lead Thread Pitch	Reduced Neck Height	Hex	Connection Engagement
07501	8mm	3.5mm	3.35mm	3.35mm	1.25mm	1mm	2.11mm	2.51mm
07502	10mm	3.5mm	3.35mm	3.35mm	1.5mm	1.75mm		
07503	12mm	3.5mm	3.35mm	3.35mm	1.5mm	1.75mm		
07504	14mm	3.5mm	3.35mm	3.35mm	1.5mm	1.75mm		
07505	8mm	3.9mm	3.40mm	3.55mm	1.25mm	1mm		
07506	10mm	3.9mm	3.40mm	3.55mm	1.5mm	1.75mm		
07507	12mm	3.9mm	3.40mm	3.55mm	1.5mm	1.75mm		
07508	14mm	3.9mm	3.40mm	3.55mm	1.5mm	1.75mm		
07509	8mm	4.4mm	3.40mm	3.70mm	2mm	1mm		
07510	10mm	4.4mm	3.40mm	3.70mm	2.5mm	1.75mm		
07511	12mm	4.4mm	3.40mm	3.70mm	2.5mm	1.75mm		
07512	14mm	4.4mm	3.40mm	3.70mm	2.5mm	1.75mm		
07513	8mm	4.9mm	3.40mm	4.20mm	2mm	1mm		
07514	10mm	4.9mm	3.40mm	4.20mm	2.5mm	1.75mm		
07515	12mm	4.9mm	3.40mm	4.20mm	2.5mm	1.75mm		
07516	14mm	4.9mm	3.40mm	4.20mm	2.5mm	1.75mm		

NOTE Deduct 0.25mm for actual full implant length (A).
Single 2.9mm prosthetic platform fits all implants.

PRODUCT 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

PRODUCT 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

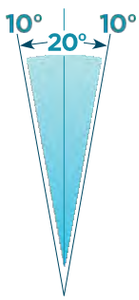
Red Extended Range Insert Low Retention

Block-Out Spacer

LOCATOR® CORE TOOL & RETENTION INSERTS

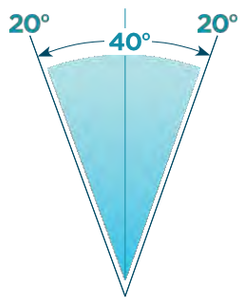
STANDARD INSERTS

Dual retention to maximize stability and pivoting action that accommodates up to 20° of total divergence between two implants.



EXTENDED RANGE INSERTS

Pivoting action accommodates up to 40° of total divergence between two implants.



Blue Low Retention | Pink Medium Retention | Clear High Retention

Gray Zero Retention | Red Low Retention | Orange Medium Retention | Green High Retention

REMOVAL TOOL

Use the sharp edge on the end of the removal tool to engage and remove the insert from the Denture Housing.

INSERTION TOOL

Use the tip of the insertion tool to seat the insert.

ABUTMENT DRIVER & SLEEVE

Use the abutment drive with the abutment sleeve to carry and securely place your abutment onto the implant.

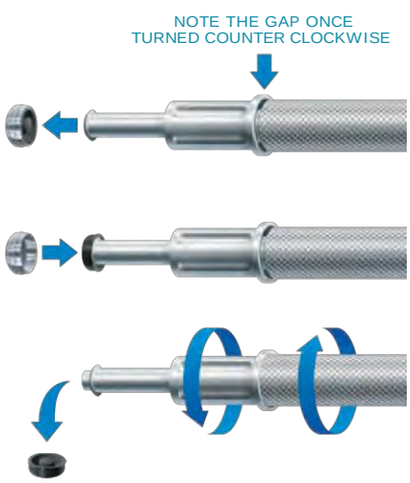
3-IN-1 CORE TOOL

Loosen the Removal Tool a full 3 turns counter clockwise (you will see a visible gap).

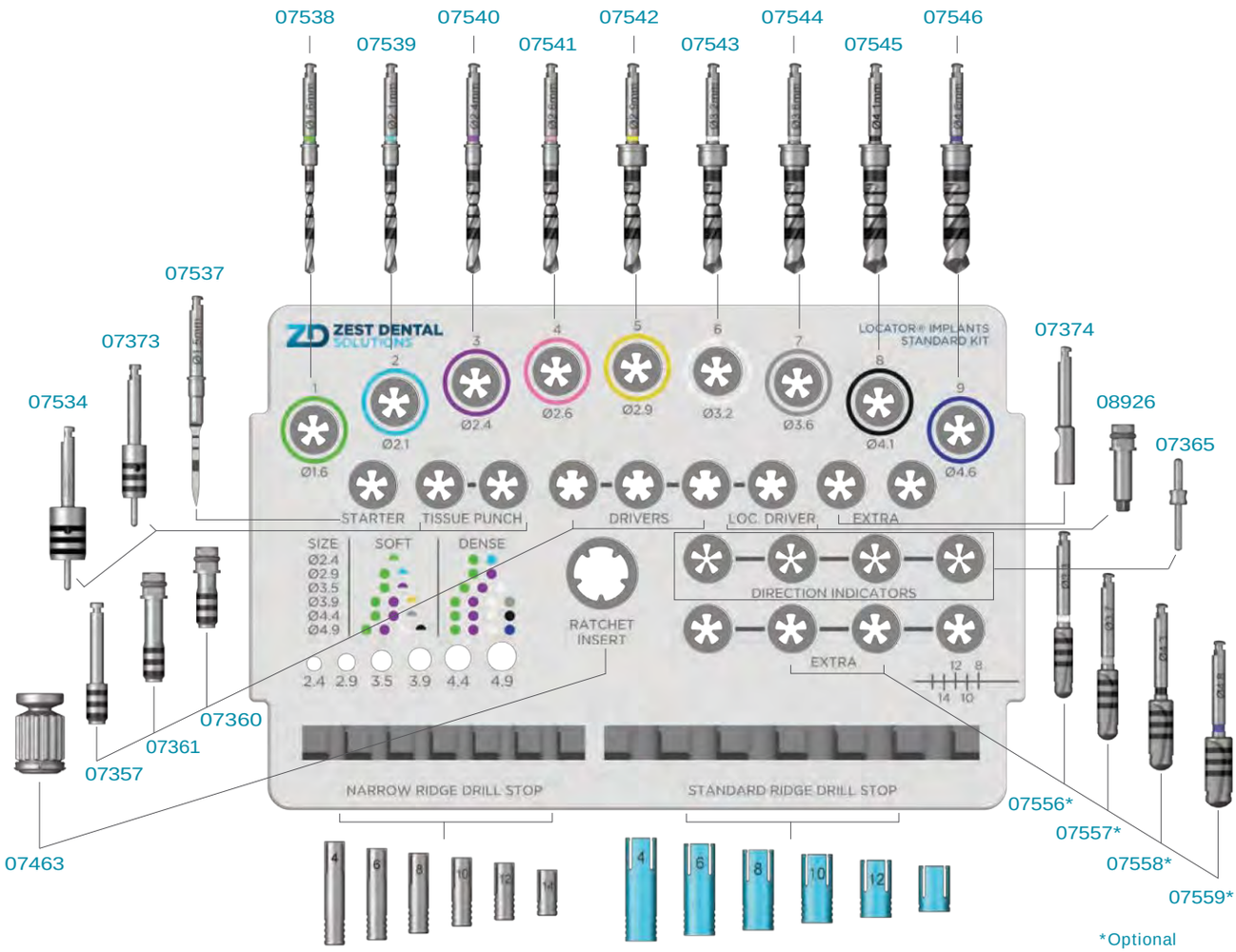
To remove a LOCATOR Insert from the Denture Housing, simply insert the tip into the Housing/Insert assembly and push straight into the bottom of the Insert. Then, tilt the tool so that the sharp edge of the tip will grab hold of the Insert and pull it out of the Denture Housing.

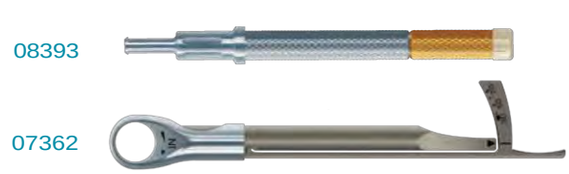
To disengage the Insert from the tip of the Removal Tool; point the tool down and away from you and tighten the Removal Tool clockwise back onto the Core Tool. This will activate the removal pin and disengage the Insert from the tip of the Removal Tool.

Separate the Removal Tool section from the LOCATOR Core Tool and use the Seating Tool end to place a new Insert into the empty Denture Housing.



LOCATOR® IMPLANT SURGICAL KIT



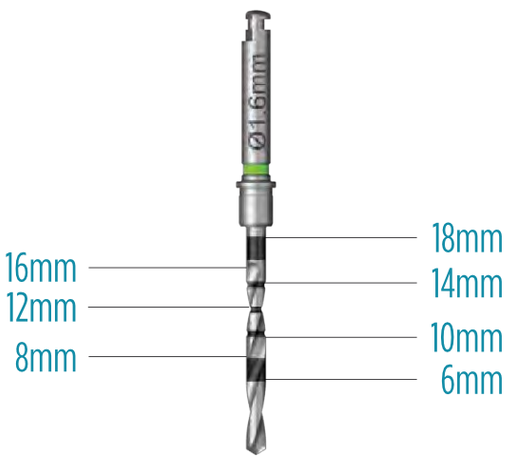


Included only in the premium kit.

The LOCATOR Standard and Premium Implant Surgical Kits offer simplified surgical kit design with convienent color coded drill protocol for reference and ease-of-use during procedures. The LOCATOR Implants Surgical Kit makes implant procedures simpler, easier, and worry-free allowing clinicians to focus more energy on the clinical and esthetic goals of the case. With LOCATOR Implants you get everything thats expected from a premium system in a bundled solution at a value price thats affordable for clincians and patients.

DRILLING PROTOCOL

DRILL LASER DEPTH MARKINGS

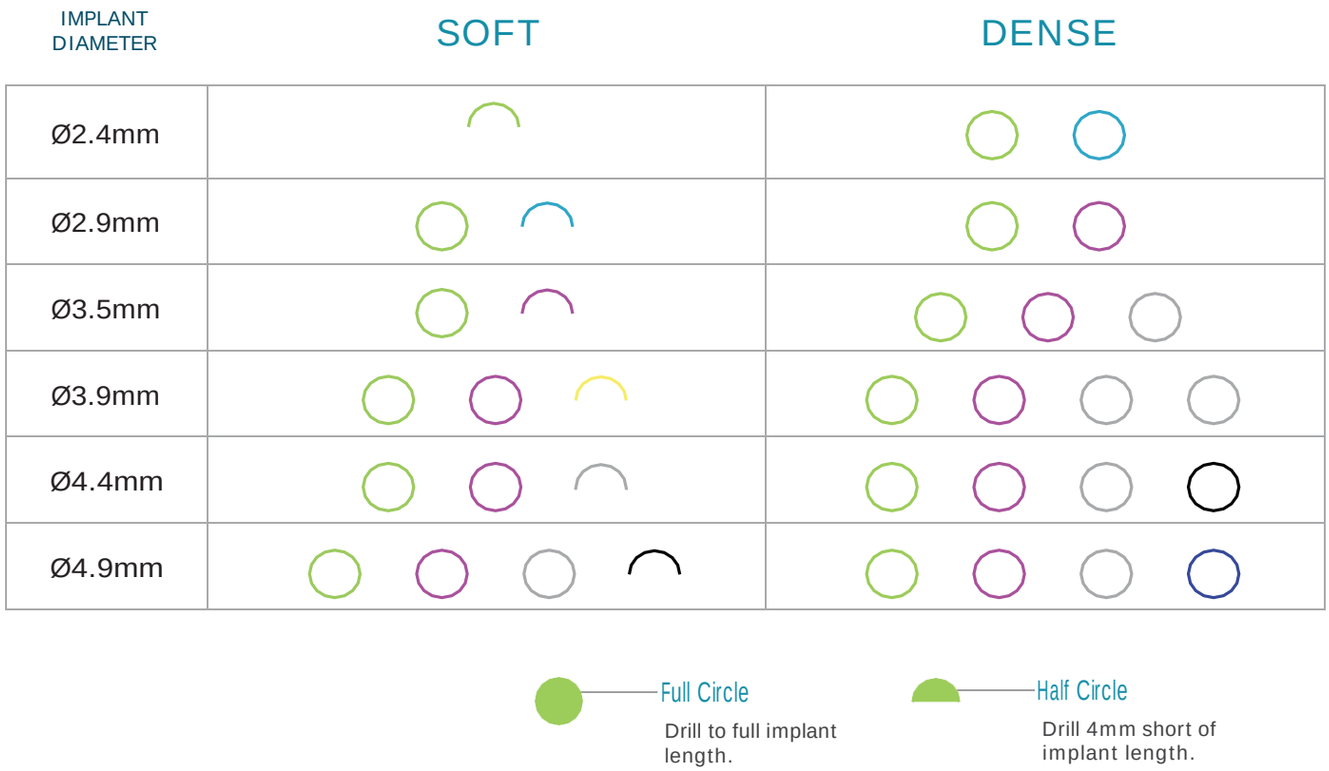


DRILL STOPS

DRILL COLOR CODES

Ø1.6 Ø2.1 Ø2.4 Ø2.6 Ø2.9 Ø3.2 Ø3.6 Ø4.1 Ø4.6

DRILLING PROTOCOL CONT.



TIPS

Implant Insertion - A LOCATOR Overdenture Implant can be placed with a torque indicating ratchet or a surgical hand piece. The speed of insertion should not exceed 50rpm. Implant insertion torque should not exceed 70Ncm.

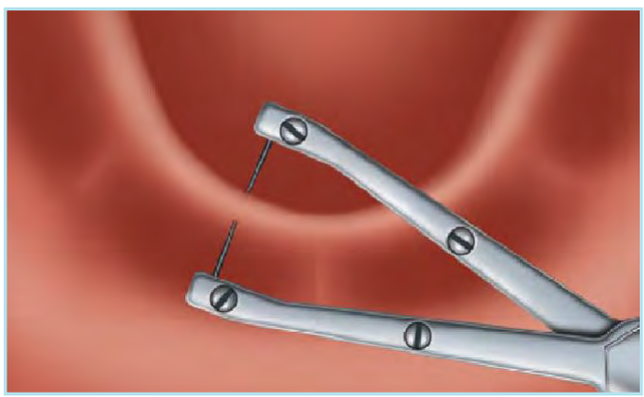
Follow the D2/D3/D4 drilling sequence prior to following the D1 drilling sequence. This offers the flexibility to adapt the drilling protocol to the patient's bone quality. For D1 bone density, an optional cortical drill may be used as the final drilling sequence step for the 3.5, 3.9, 4.4, or 4.9mm diameter implant.

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.

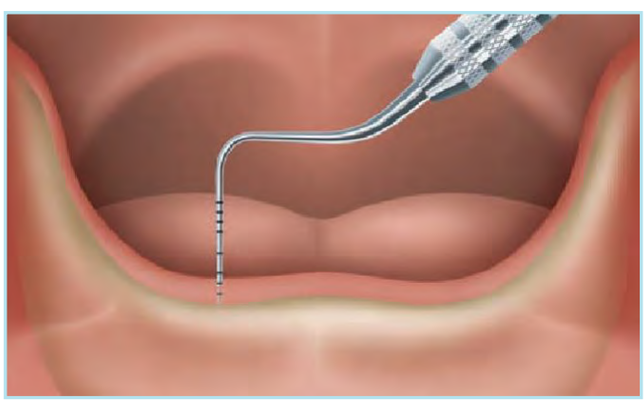
NOTE

Recommended drilling speed is 800-1200RPM. Do not exceed a maximum of 800 RPM when utilizing tissue punch.

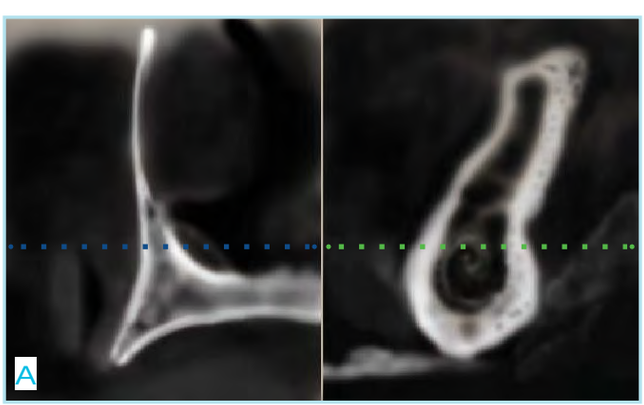
PRE-OPERATIVE TREATMENT PLANNING

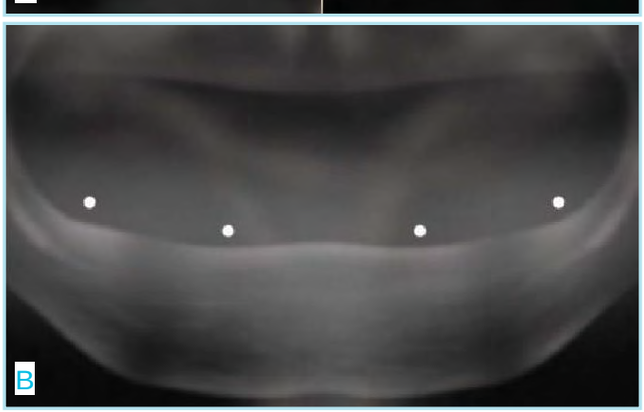


1 Evaluate available bone width at desired implant positions by using the index finger/thumb technique or a ridge mapping instrument (which can be purchased through most dental instrument companies).



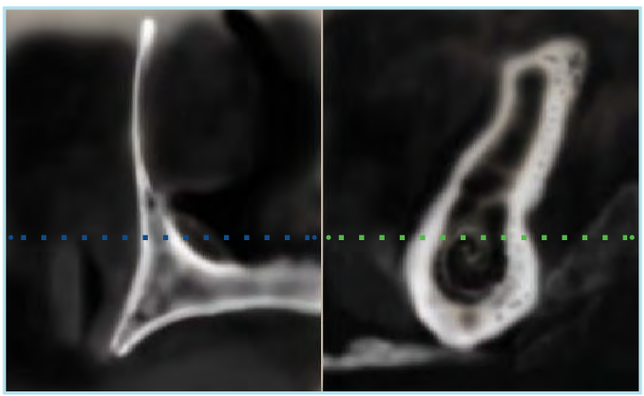
2 Measure gingiva height at each planned implant location using a periodontal probe to determine the proper LOCATOR® Abutment cuff height.





3A-3B A panoramic radiograph or CBCT with radiographic markers may be used to evaluate the bone topography and determine the appropriate implant positions.

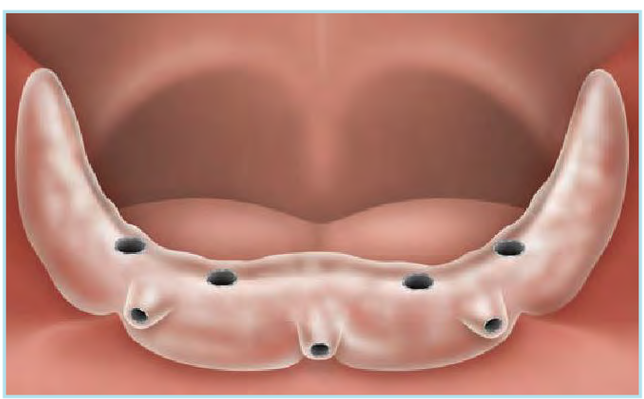
PRE-OPERATIVE TREATMENT PLANNING CONT.



4 Choose the appropriate implant size for the patient. Zest recommends placement of the LOCATOR® Overdenture 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.

5 Determine if the patient's existing overdenture(s) will be used or if new ones will be fabricated. If a new overdenture is fabricated, follow the standard overdenture fabrication protocols.



6 Optional: A surgical guide for implant placement may be fabricated prior to surgery.

MANDIBULAR IMPLANT PLACEMENT

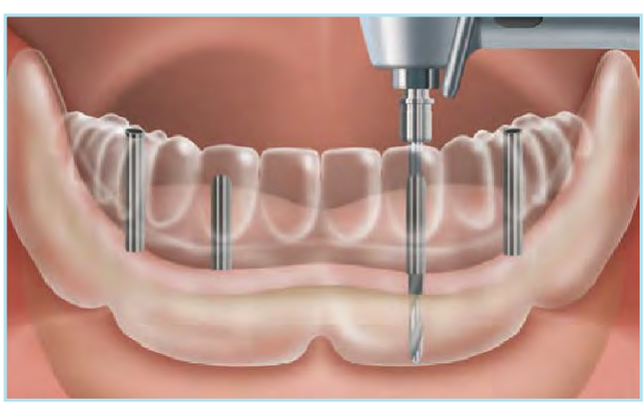
After patient selection and evaluation protocols have been completed, determine the number of implants required and discuss all treatment options with the patient. Zest Dental Solutions® recommends a minimum of four implants to be placed in the mandible (option of two implants when all standard ridge implants are placed) and up to six in the maxilla for optimal retention.

TIPS

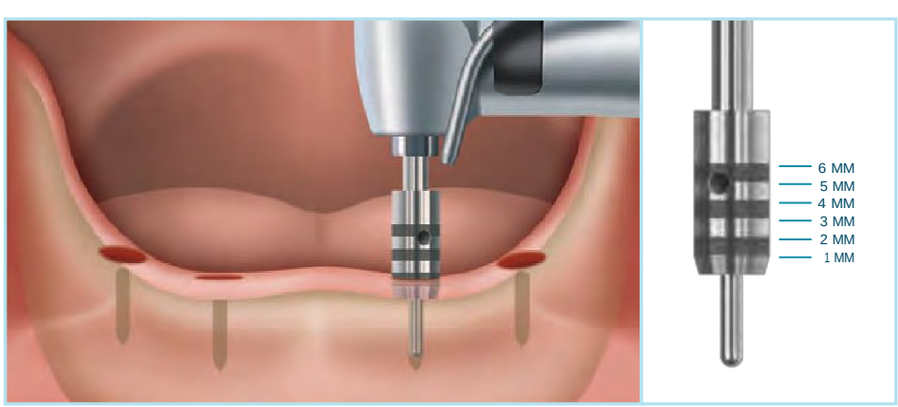
It is recommended to follow the D2/D3/D4 drilling sequence prior to following the D1 drilling sequence. This offers the flexibility to adapt the drilling protocol to the patients bone quality.

For D1 bone type, an optional cortical drill may be used as the final drilling sequence step. The cortical drill may be used to a depth of 2-4mm.

MANDIBULAR PLACEMENT OF FOUR 2.9MM X 12MM IMPLANTS

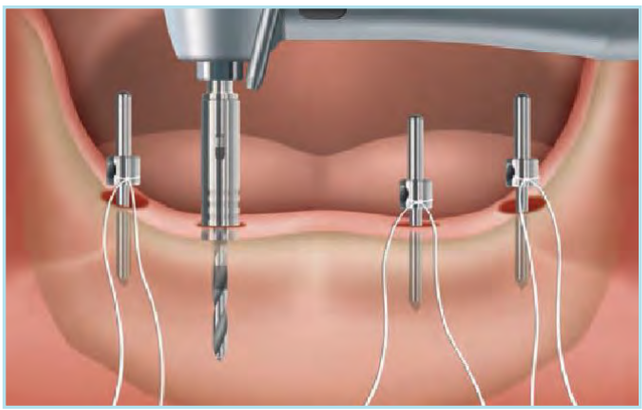


1 Using a surgical guide or by free hand, mark the implant osteotomy locations using the Starter Drill to drill through the gingiva and into the bone crest 6mm. Note the gingival height. The recommended drilling speed is 800-1200rpm.



2 Remove the gingival cores at each site using the appropriate Rotary Tissue Punch (07373, 07534). Place the guide pin portion of the Rotary Tissue Punch into the Pilot Drill osteotomy and advance the drill unit to cut away the gingiva. Advance the Rotary Tissue Punch to the laser depth mark corresponding to the gingival height measurement. The recommended drilling speed is between 200-500rpm.

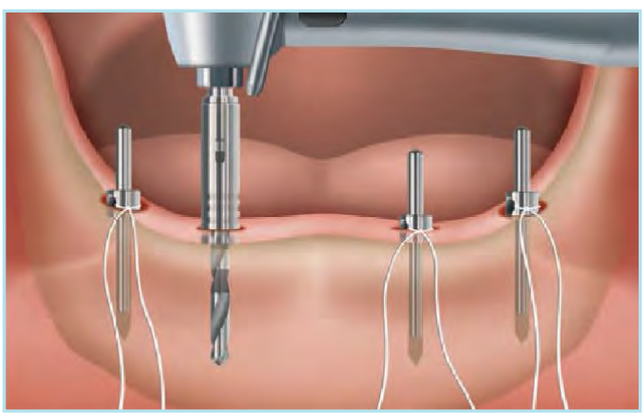
MANDIBULAR IMPLANT PLACEMENT CONT.



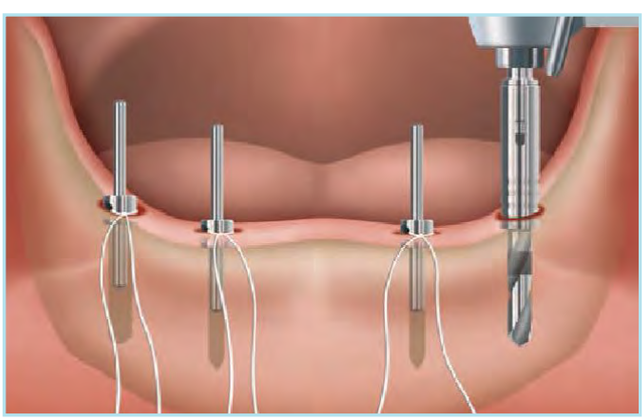
3 Place the large diameter end of the Direction Indicator (07365) into the Starter Drill osteotomies to verify the proper alignment. Attach the proper lenght Drill Stop onto the Starter Drill according to the desire drilling depth. The recommended drilling speed is 800-1200rpm. Continue osteotomy preparation to the desire depth at each implant site.

TIPS:

- Alternatively, drill to the proper laser depth marking on the drill calculated by adding the implant length plus the gingival tissue height.
- If divergence is shown to be undesirable based on the Direction Indicator, use a tool, such as a Lindemann drill, to correct.



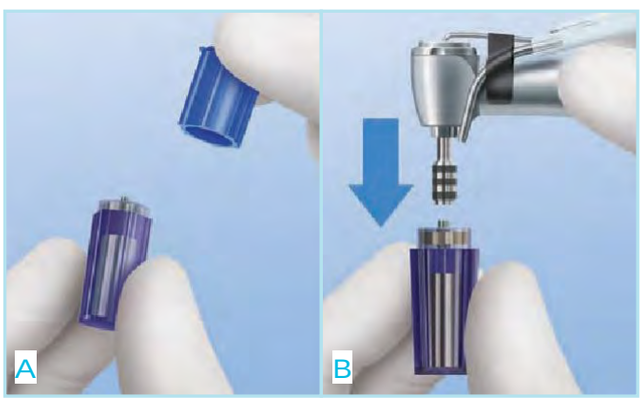
4 Place the proper length Drill Stop onto the 1.6mm drill according to the desired drilling depth. The recommended drilling speed is 800-1200rpm. Continue osteotomy preparation to the desired depth at each implant site.



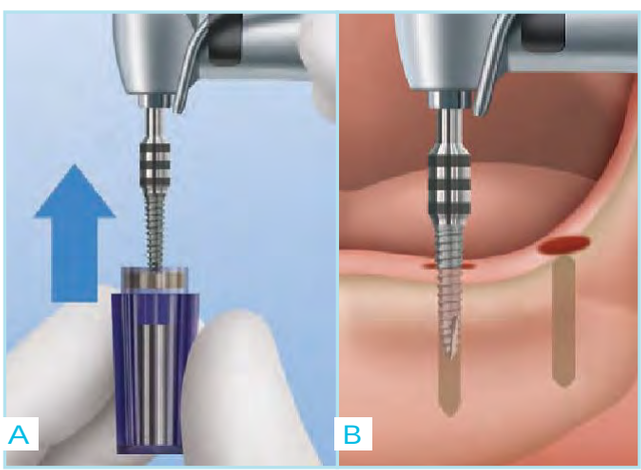
5 Place the 1.6mm diameter (large) end of the Direction Indicator into the osteotomies to verify proper alignment. Place the proper length Drill Stop onto the 2.1mm drill (07539) according to the desired drilling depth. Drill 4mm short of the full implant length. The recommended drilling speed is 800-1200rpm. Continue osteotomy preparation to the desired depth at each implant site.

MANDIBULAR IMPLANT PLACEMENT (FLAPLESS)

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



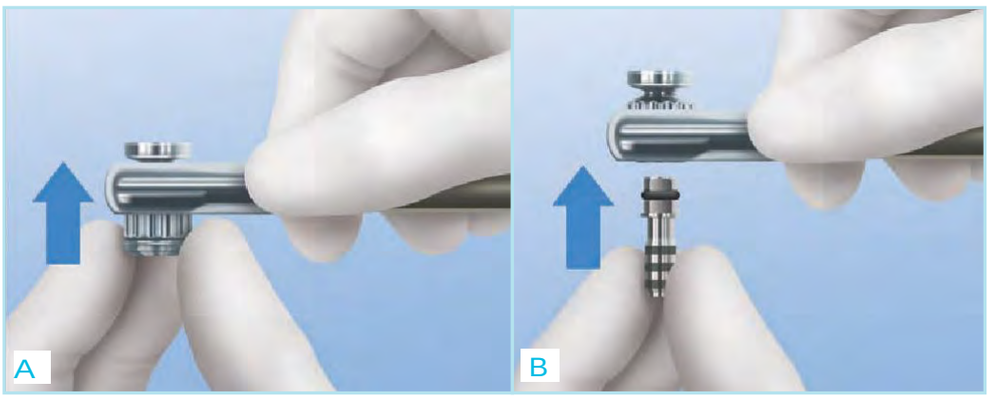
7A-7B Remove the Housing from the implant vial and do not discard. The LOCATOR® Abutment is included in the Housing. Set the drilling unit speed at 30rpm and the placement torque at 35Ncm. Place the Implant Latch Driver (07357) in the handpiece. Seat it onto the hex on the top of the implant and press 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.



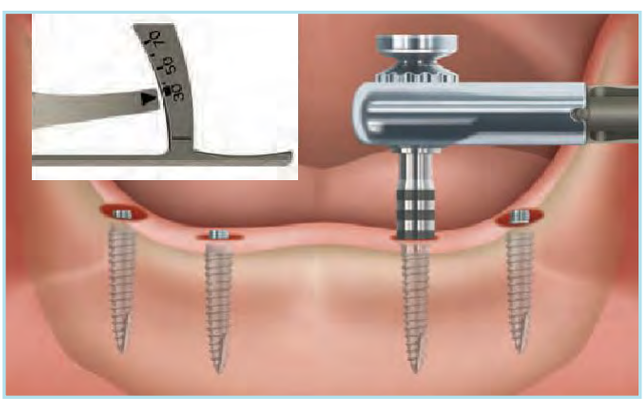
8A-8B Remove the implant from the vial. Carry the implant to the mouth, place it into the osteotomy and insert at 30rpm. Use the Latch Driver to drive the implant three quarters (3/4) of the way into the osteotomy and finalize insertion with a Torque Indicating Ratchet Wrench (07362).

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

MANDIBULAR IMPLANT PLACEMENT CONT.



9A-9B Assemble the Ratchet Insert and the Torque Indicating Ratchet Wrench (07362) to finalize seating. Short and Long Implant Drivers are available in the surgical kit (07360, 07361).



10 Engage the Implant Driver onto the hex on the top of the implant and verify that it is fully engaged. Slowly ratchet the implant to full depth. 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.

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.

Repeat until the final desire position is obtained. The next drill size up may also be used if strong resistance occurs before the implant reached its final desired position.

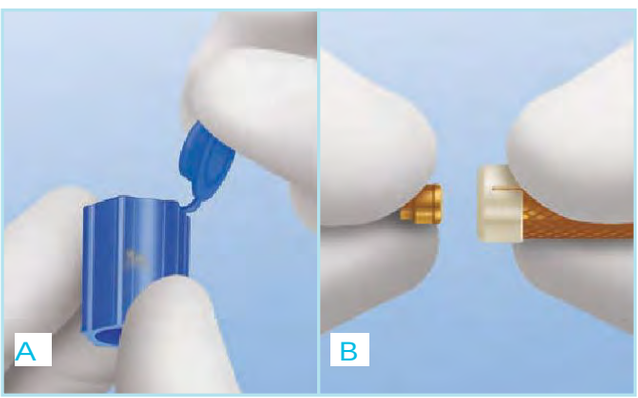
NOTE Immediate load protocol is not recommeded unless all implants achieve at least 30Ncm of torque. Implant insertion torque should not exceed 70Ncm.

LOCATOR® HEALING ABUTMENT & LOCATOR ABUTMENT PLACEMENT

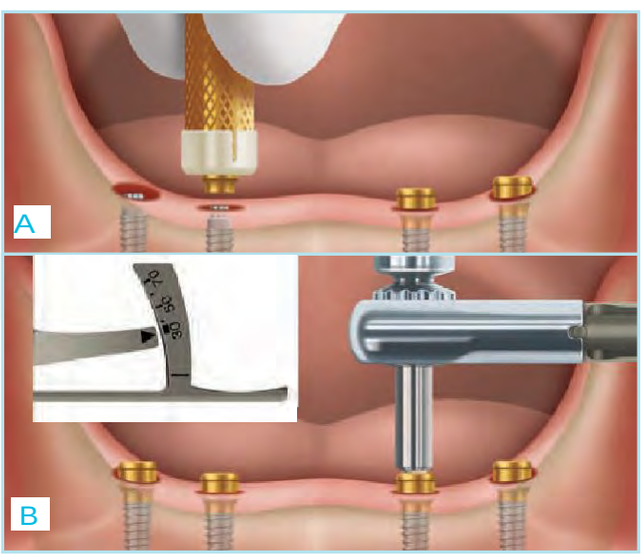
HEALING ABUTMENT PLACEMENT

1 Optional: If the implant does not reach a final seating torque of 30Ncm, a LOCATOR Healing Abutments (07339 or 07340) are available. Use a 0.050 inch (1.25mm) Hex Driver and thread the Healing Abutment with the appropriate cuff height on the implant until finger tight. Relieve the overdenture acrylic and place a soft liner in the overdenture around the LOCATOR Healing Abutments during the implant integration period.

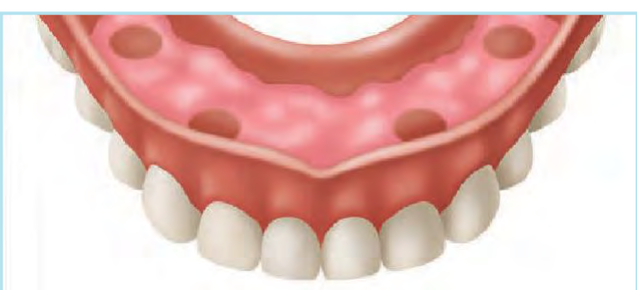
LOCATOR ABUTMENT PLACEMENT



2A-2B Open the flip Housing on the top of the vial Housing and remove the LOCATOR Abutment. Place the Abutment Holder Sleeve onto the LOCATOR Abutment Driver and insert into the triangular channel of the LOCATOR Abutment.



3A-3B Thread the LOCATOR Abutment onto the implant until finger tight. If the implant placement torque was 30Ncm or greater, the Abutments may be tightened to the recommended torque level of 30Ncm. If the implant placement torque did not reach 30Ncm, the Abutment should only be hand tightened. Assemble the LOCATOR Abutment Ratchet Insert and the Torque Indicating Ratchet Wrench (07362) with LOCATOR Square Torque Driver (08926) to torque the attachments to 30Ncm.



4 If the implant placement torque was less than 30Ncm, relieve the overdenture acrylic and place a soft liner in the overdenture around the LOCATOR Abutments during the implant integration period.

FOR IMMEDIATE LOADING

Proceed with proper precautions: If the implant placement torque was 30Ncm or greater for all implants, follow the steps for processing the LOCATOR Denture Housing and Inserts into the overdenture.