

Surgical Technique



Acumed® is a global leader of innovative orthopaedic and medical solutions.



We are dedicated to developing products, service methods, and approaches that improve patient care.



Acumed® Ulna Nail 2 System

Designed in conjunction with Roy Sanders, MD, the Acumed Ulna Nail 2 includes three nail diameters and seven length options, power reamers and carbon fiber radiolucent targeting guides to streamline the procedure, threaded holes within the nail, headless hexalobe screws to help minimize soft-tissue irritation, and the option to lock the nail distally providing additional fixation within the canal.

The Ulna Nail 2 must be used in conjunction with the Acumed Fibula and Forearm Nail (FFN) 2 Base Set, which contains universal instrumentation to implant the Ulna Nail 2, Fibula Nail 2, and screws.

Indications for Use:

The Acumed Fibula and Forearm Nail 2 System is intended for fixation of fractures and osteotomies of the fibula and ulna, including fractures where the medullary canal is narrow or flexibility of the implant is paramount.

	Definition
Warning	Indicates critical information about a potential serious outcome to the patient or the user.
Caution	Indicates instructions that must be followed in order to ensure the proper use of the device.
Note	Indicates information requiring special attention.

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Ulna Nail 2 System Features

Comprehensive System






















The Acumed Ulna Nail 2 is designed to address simple, transverse, and short oblique fractures as well as osteotomies of the ulna.

The Ulna Nail 2 includes:

- ▶ 21 nails offered in three diameters and seven lengths including a short 120 mm nail to address proximal olecranon fractures
- ▶ Power reamers and carbon fiber radiolucent targeting guides to streamline the procedure
- ▶ Threaded holes within the nail that engage the interlocking screws
- ▶ Headless hexalobe screws aimed to minimize soft-tissue irritation
- ▶ Option to lock the nail distally, providing additional fixation within the canal

The Ulna Nail 2 must be used in conjunction with the Acumed Fibula and Forearm Nail 2 Base Set, which contains universal instrumentation to implant the Ulna Nail 2, Fibula Nail 2, and screws.

Note: All nail tail diameters are 6.35 mm

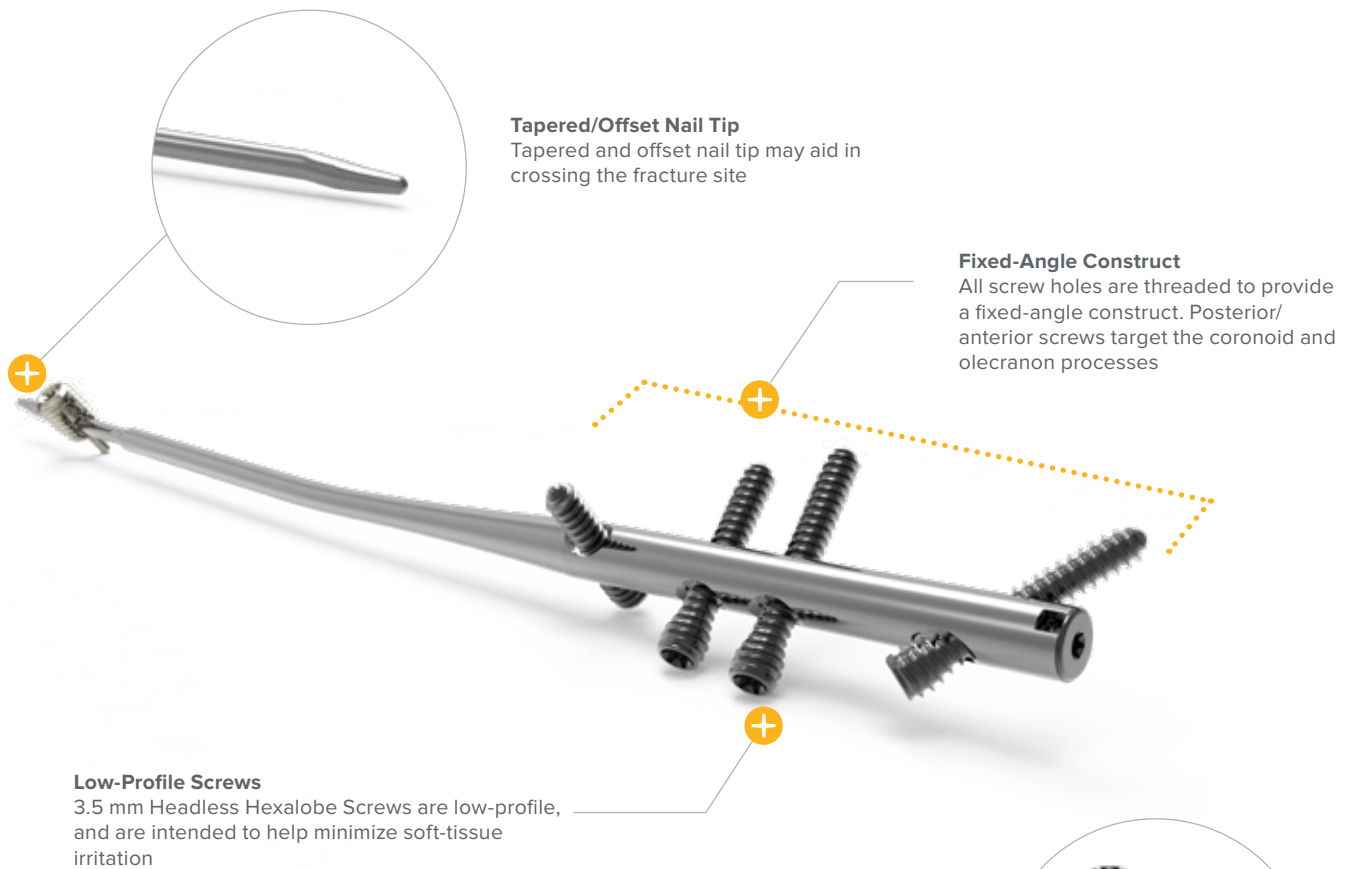
3.0 mm Ulna Nail 2		120 mm (4011-3012N-S)
		170 mm (4011-3017N-S)
		190 mm (4011-3019N-S)
		210 mm (4011-3021N-S)
		230 mm (4011-3023N-S)
		250 mm (4011-3025N-S)
		270 mm (4011-3027N-S)
3.6 mm Ulna Nail 2		120 mm (4011-3612N-S)
		170 mm (4011-3617N-S)
		190 mm (4011-3619N-S)
		210 mm (4011-3621N-S)
		230 mm (4011-3623N-S)
		250 mm (4011-3625N-S)
		270 mm (4011-3627N-S)
4.0 mm Ulna Nail 2		120 mm (4011-4012N-S)
		170 mm (4011-4017N-S)
		190 mm (4011-4019N-S)
		210 mm (4011-4021N-S)
		230 mm (4011-4023N-S)
		250 mm (4011-4025N-S)
		270 mm (4011-4027N-S)

Ulna Nail 2 implants accept:

- ▶ 3.5 mm Headless Hexalobe Screws
- ▶ 3.5 mm Nonlocking Hexalobe Screws

Ulna Nail 2 System Features [continued]

Implant Features



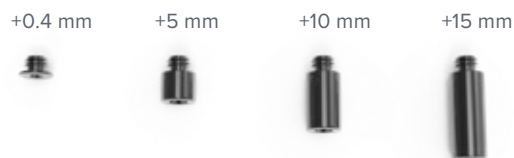
Screws

3.5 mm Nonlocking Hexalobe (8–65 mm) and 3.5 mm Headless Hexalobe (12–65 mm) Screws are both included in the system. The 3.5 mm Headless Hexalobe Screws lock into the threaded holes within the nail and are intended to create a low-profile construct to help minimize soft-tissue irritation.



Optional End Caps

End caps assist in limiting ossification over the end of the nail, making the nail threads easier to engage if removal is desired. End caps also allow surgeons to create an intermediate nail length while adjusting for anatomic variances and screw trajectories.



Ulna Nail 2 System Features [continued]

Instrumentation

The Ulna Nail 2 nails are delivered in sterile packaging and are designed to be used in conjunction with the Fibula and Forearm Nail 2 Base Set. This set includes shared instrumentation to implant the Ulna Nail 2, Fibula Nail 2 and screws.

Reamers

Reamers are included in the system to provide a single step in which to measure for both nail length and diameter. The reamers may be used by hand or under power to optimize operative time.



FFN Reamer Diameter	Ulna Nail 2 Diameter
FFN 3.1 mm Reamer (80-2460)	3.0 mm Ulna Nail 2 (4011-30XXN-S)
FFN 3.7 mm Reamer (80-2461)	3.6 mm Ulna Nail 2 (4011-36XXN-S)
FFN 4.1 mm Reamer (80-2462)	4.0 mm Ulna Nail 2 (4011-40XXN-S)



Radiolucent Carbon Fiber Targeting Guides

The radiolucent carbon fiber FFN Primary and Secondary Targeting Guides allow for unobstructed viewing of the nail and screw positioning under fluoroscopy to ensure correct placement. Five guide wire holes have been included in the design of the FFN Primary Targeting Guide. The center-most distal guide wire hole allows for precise viewing of the nail-to-FFN Base Plate junction under fluoroscopy, while the proximal four converging guide wire holes allow for initial fracture fixation when needed.



FFN Bolt
(80-3886)



2.0 mm Easyout, QR
(80-0599)



3.0 mm Easyout, QR
(80-0601)

Removal Instruments

A variety of instruments to aid in both implant and screw removal are included in the system. The FFN Bolt (80-3886), 2.0 mm Easyout, QR (80-0599), and 3.0 mm Easyout, QR (80-0601) provide multiple options to remove the screws or ulna nail if necessary.

Ulna Nail 2 System Features [continued]

Optional Tip-Loc™ Bushing & Set Screw

The Ulna Nail 2 offers the option to lock the nail distally, providing additional fixation within the canal.

The Tip-Loc Bushing and Tip-Loc Set Screw sit centrally within the last 1.5" of the nail. These sterile packed implants are offered in 1 mm increments ranging from 6 mm through 16 mm in length.

Note: The 120 mm length ulna nails in all three diameters do not accept the Tip-Loc Bushing & Set Screw as these short nails were designed for more-proximal ulna fractures in which distal locking is not necessary.



Tip-Loc Bushing (3017-650XX)

- ▶ Titanium
- ▶ 6.35 mm in diameter



Tip-Loc Set Screw (3017-250XX)

- ▶ Cobalt Chrome
- ▶ 3.4 mm in diameter
- ▶ Implanted using FFN T8 Driver
- ▶ Sterile-packed with corresponding bushing size

Tip-Loc Bushing & Set Screw Kit	Part number
Tip-Loc Bushing & Set Screw, 6 mm	47-0006-S
Tip-Loc Bushing & Set Screw, 7 mm	47-0007-S
Tip-Loc Bushing & Set Screw, 8 mm	47-0008-S
Tip-Loc Bushing & Set Screw, 9 mm	47-0009-S
Tip-Loc Bushing & Set Screw, 10 mm	47-0010-S
Tip-Loc Bushing & Set Screw, 11 mm	47-0011-S
Tip-Loc Bushing & Set Screw, 12 mm	47-0012-S
Tip-Loc Bushing & Set Screw, 13 mm	47-0013-S
Tip-Loc Bushing & Set Screw, 14 mm	47-0014-S
Tip-Loc Bushing & Set Screw, 15 mm	47-0015-S
Tip-Loc Bushing & Set Screw, 16 mm	47-0016-S



Tip-Loc Clamp
(80-3891)

The Tip-Loc Bushing is implanted using the Tip-Loc Clamp, a Near Cortex Drill, and a Far Cortex Drill. The Tip-Loc Clamp is entirely radiolucent to aid in visualization under fluoroscopy and includes a central cannula that allows for +/- 2 mm of adjustment to center and align the bushing with the nail tip.



FFN Near Cortex Drill
(80-3696)



FFN Far Cortex Drill
(80-3697)

Instrument Overview



2.0 mm x 9" ST Guide Wire
(WS-2009ST)



2.0 mm Short Guide Wire
(35-0023)



FFN Soft-Tissue Protector
(80-2896)



FFN 6.5 mm Drill
(80-4039)



FFN 2.7 mm Reamer
(80-2459)



FFN 3.1 mm Reamer
(80-2460)



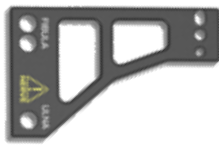
FFN 3.7 mm Reamer
(80-2461)



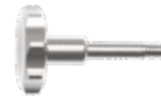
FFN 4.1 mm Reamer
(80-2462)



FFN Primary Targeting Guide
(80-2454)



FFN Secondary Targeting Guide
(80-2456)



FFN Locking Knob
(80-2499)



FFN Locking Bolt
(80-2452)



Quick Release T-Handle
(MS-T1212)



Medium Ratcheting Driver Handle
(80-0663)



FFN Multiple Contact Hammer
(80-3966)



FFN 2.8 mm Drill Guide
(80-2505)



FFN 2.8 mm Drill
(80-2471)



FFN T15 Hexalobe Driver
(80-3619)



FFN T8 Hexalobe Driver
(80-2895)

Instrument Overview [continued]



Cortex Awl w/Quick Release
(80-3795)



FFN Base Plate
(80-2448)



FFN Bolt
(80-3886)



FFN Handle
(80-3885)



FFN Depth Gauge
(80-2468)



FFN 3.5 mm Cannula
(80-2476)



FFN Headless Screw Countersink
(80-3769)



Sharp Hook
(PL-CL06)



FFN Near Cortex Drill
(80-3696)



FFN Far Cortex Drill
(80-3697)



3.0 mm Easyout, QR
(80-0601)



2.0 mm Easyout, QR
(80-0599)



Tip-Loc™ Rotary Cannula
(80-3760)



Tip-Loc Clamp
(80-3891)



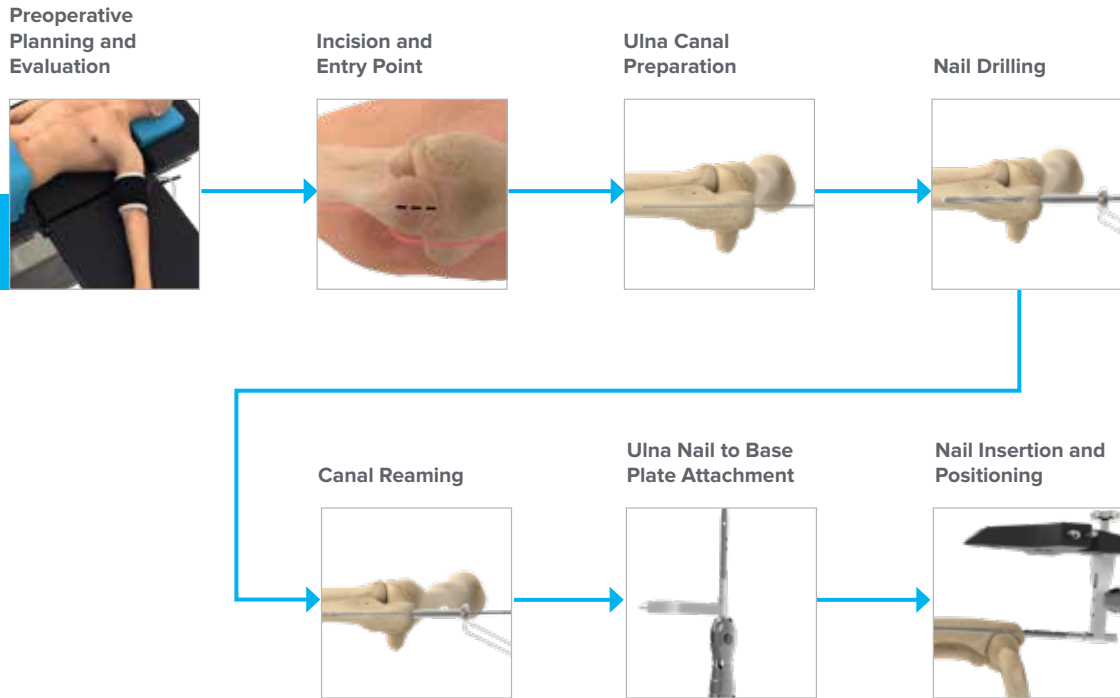
Tip-Loc Coupler Attachment
(80-2484)



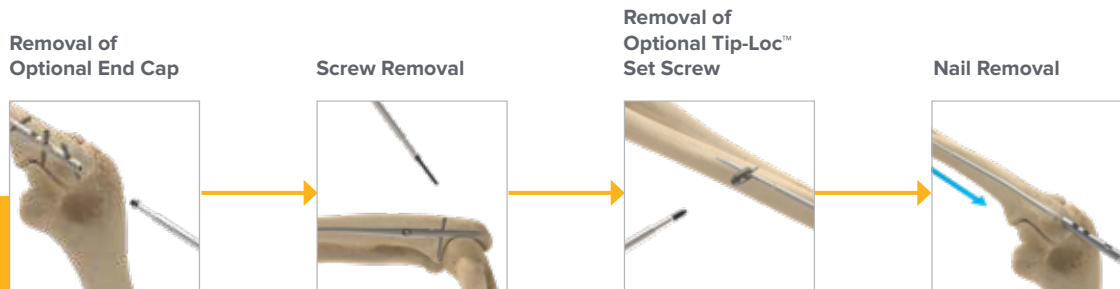
Tip-Loc Bushing Coupler Handle
(80-2483)

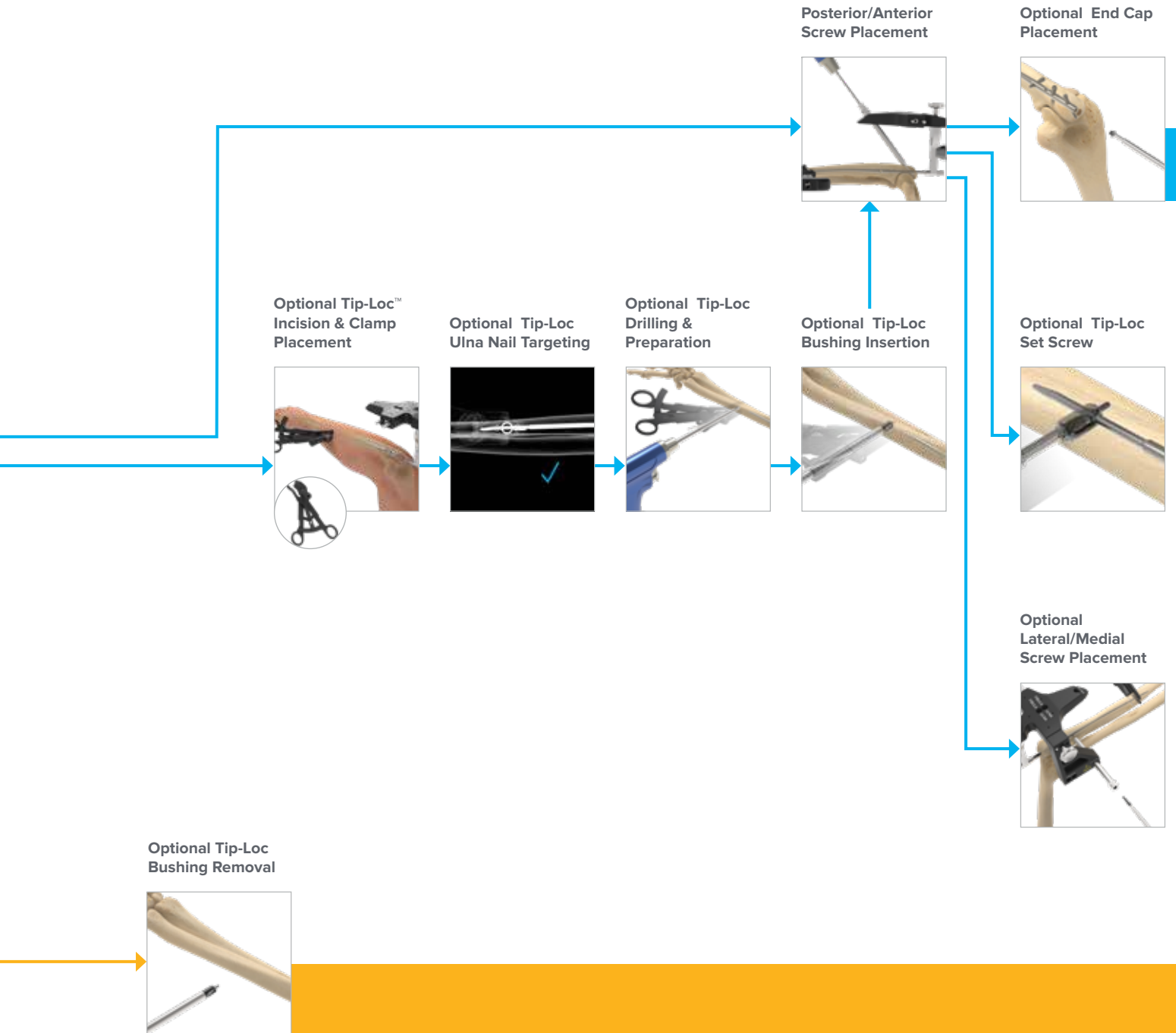
Surgical Technique Overview

Ulna Nail 2 Surgical Technique



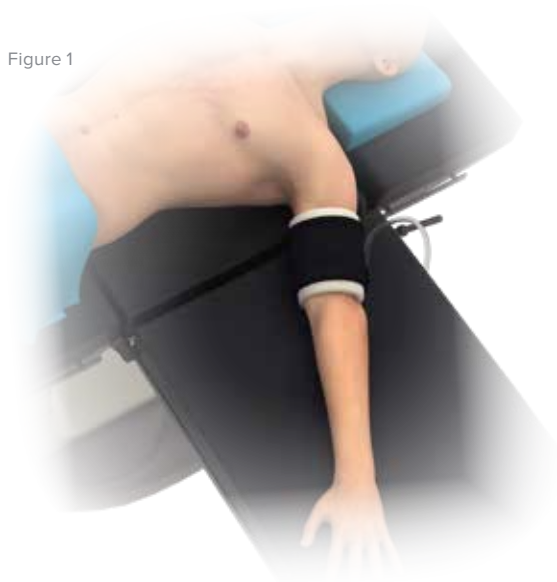
Ulna Nail 2 Removal Surgical Technique





Ulna Nail 2 Surgical Technique

Figure 1



1 Preoperative Planning and Evaluation

Evaluate the location and characteristics of the fracture(s) using fluoroscopy.

It may be necessary to reference the uninjured contralateral ulna to estimate length.

Place the patient in a supine position and use a radiolucent arm board (Figure 1). Alternatively, the patient can be placed in a lateral recumbent position, with the arm brought over the patient's torso (Figure 2).

Note: Radiographs in both the anterior to posterior and lateral planes are recommended.

Figure 2

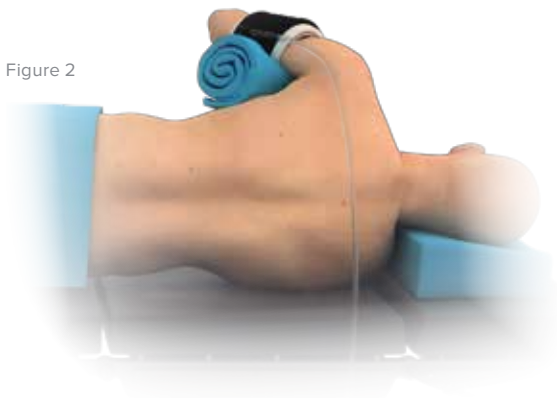
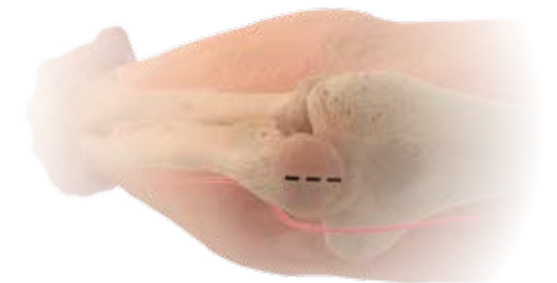


Figure 3



2 Incision and Entry Point

The ulna fracture can be reduced and fixed using an entirely percutaneous (closed) technique. Make a 10–20 mm incision longitudinally along the tip of the olecranon to expose the implant entry site (Figure 3). Carry the dissection down sharply through the subcutaneous tissues and split the triceps tendon longitudinally.

The entry point for the nail should be centered on the olecranon process, directly in line with the proximal intramedullary canal of the ulna.

Warning: Care must be taken to avoid the ulnar nerve.

Ulna Nail 2 Surgical Technique [continued]

3 Ulna Canal Preparation

Insert the 2.0 mm x 9" ST Guide Wire (WS-2009ST) in the center of the olecranon process, directly in line with the proximal intramedullary canal of the ulna (Figure 4). Confirm under fluoroscopy that the guide wire is centrally located in both posterior-to-anterior (P/A) and lateral-to-medial (L/M) planes.

Note: Avoid penetrating the cortical bone of the intramedullary canal with the guide wire to ease subsequent reaming and nail insertion.



Figure 4



2.0 mm x 9" ST
Guide Wire
(WS-2009ST)

Ulna Nail 2 Surgical Technique [continued]

Figure 5

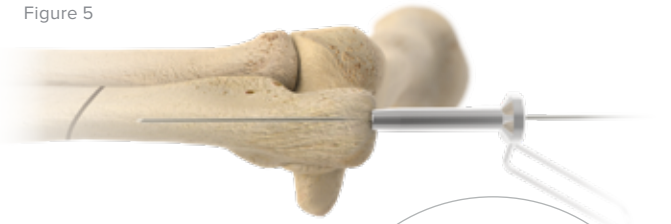
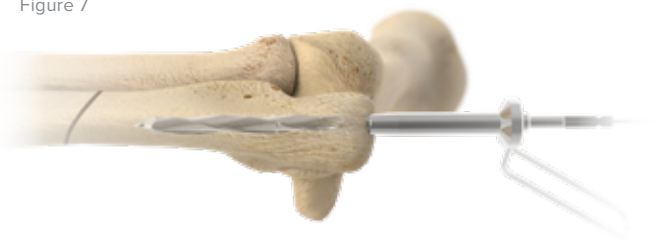


Figure 6



Figure 7



4 Nail Drilling

Slide the FFN Soft-Tissue Protector (80-2896) over the 2.0 mm x 9" ST Guide Wire (WS-2009ST) and ensure it is down to the bone surface. Place the cannulated FFN 6.5 mm Drill (80-4039) over the guide wire (Figure 5). Drill to the last depth marking, indicated by the letter "U" (Figure 6 and 7)

Note: The drill depth can also be confirmed under fluoroscopy by ensuring the olecranon tip is aligned with the last notch on the drill.

Note: In larger patients, the nail may need to be inserted deeper within the metaphysis so that the proximal screws properly target the olecranon and coronoid processes. To ensure the proximal end of the nail still provides cortical support, an optional end cap can be used to extend the overall nail length. If using the optional FFN End Cap (4014-0XXX), drill with the FFN 6.5 mm Drill through the FFN Soft-Tissue Protector to the corresponding depth marking on the drill, labeled "U." This will correspond to the proper FFN End Cap inserted in Step 9.

Note: There is an optional Cortex Awl w/Quick Release (80-3795) that can help create an initial entry point prior to placing the 2.0 mm x 9" ST Guide Wire. The awl is not intended to be used through the FFN Soft-Tissue Protector. Depth indicators found on the awl correspond with the surface of the bone. If using the optional FFN End Cap (4014-0XXX), engage the bone to the corresponding depth marking on the awl, labeled "U." This will correspond to the proper FFN End Cap inserted in Step 9.



2.0 mm x 9" ST Guide Wire (WS-2009ST)



FFN Soft-Tissue Protector (80-2896)



FFN 6.5 mm Drill (80-4039)



Cortex Awl w/Quick Release (80-3795)



FFN End Cap (4014-0XXX)

Ulna Nail 2 Surgical Technique [continued]

5 Canal Reaming

Remove the FFN 6.5 mm Drill (80-4039) and the 2.0 mm x 9" ST Guide Wire (WS-2009ST). Ensure that the FFN Soft-Tissue Protector (80-2896) remains in place and is fully seated on the bone surface. Sequentially ream the intramedullary canal through the FFN Soft-Tissue Protector, starting with the FFN 3.1 mm Reamer (80-2460), by hand using the Quick Release T-Handle (MS-T1212) or under power (Figures 8, 9, and 10). Increase in diameter until the desired cortical engagement is achieved.

Refer to the FFN Reamer Diameter table below:

FFN Reamer Diameter	Ulna Nail 2 Diameter
FFN 3.1 mm Reamer (80-2460)	3.0 mm Ulna Nail 2 (4011-30XXN-S)
FFN 3.7 mm Reamer (80-2461)	3.6 mm Ulna Nail 2 (4011-36XXN-S)
FFN 4.1 mm Reamer (80-2462)	4.0 mm Ulna Nail 2 (4011-40XXN-S)

Note: If resistance is met during reaming, retract slightly and re-advance and oscillate to allow the blunt tip of the reamer to center within the center of the canal.

Note: If reading under fluoroscopy, take care to ensure the reamer is centered in the canal.

Figure 8



Figure 9

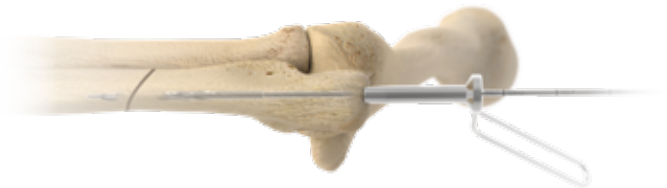


Figure 10



FFN 6.5 mm Drill
(80-4039)



2.0 mm x 9" ST
Guide Wire
(WS-2009ST)



FFN Soft
Tissue Protector
(80-2896)



FFN 3.1 mm
Reamer
(80-2460)



Quick Release
T-Handle
(MS-T1212)

Ulna Nail 2 Surgical Technique [continued]

6 Ulna Nail Selection

Advance the reamer to the desired nail depth and leave the reamer and soft-tissue protector in place (Figure 11).

The chosen reamer will determine the nail diameter selection.

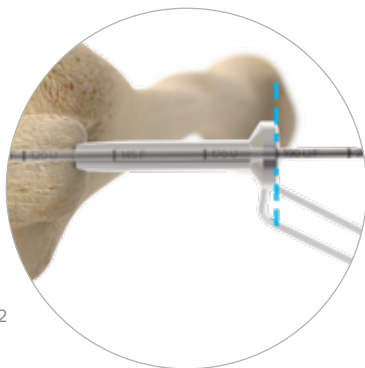
Figure 11



FFN Reamer Diameter	Ulna Nail 2 Diameter
FFN 3.1 mm Reamer (80-2460)	3.0 mm Ulna Nail 2 (4011-30XXN-S)
FFN 3.7 mm Reamer (80-2461)	3.6 mm Ulna Nail 2 (4011-36XXN-S)
FFN 4.1 mm Reamer (80-2462)	4.0 mm Ulna Nail 2 (4011-40XXN-S)

With the FFN Reamer in place and the FFN Soft-Tissue Protector seated on the bone, read the laser marks on the FFN Reamer as it aligns with the back end of the FFN Soft-Tissue Protector cannula to determine the proper nail length (Figure 12). Once all nail measurements have been recorded, remove reamer and FFN Soft-Tissue Protector.

Figure 12



Ulna Nail 2 Diameter	Ulna Nail 2 Length
3.0 mm Ulna Nail 2	120, 170, 190, 210, 230, 250, 270 mm
3.6 mm Ulna Nail 2	120, 170, 190, 210, 230, 250, 270 mm
4.0 mm Ulna Nail 2	120, 170, 190, 210, 230, 250, 270 mm

Note: All Ulna Nail 2 tail diameters are 6.35 mm, regardless of the nail shaft diameter.

Warning: Choosing a nail that is too long may result in penetration of articular joint space or leaving the nail too proud. If between lengths, make sure to select the shorter of the two nails.



3.0 mm Ulna Nail 2 (4011-30XXN-S)



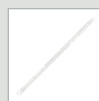
3.6 mm Ulna Nail 2 (4011-36XXN-S)



4.0 mm Ulna Nail 2 (4011-40XXN-S)



FFN 3.1 mm Reamer (80-2460)



FFN 3.7 mm Reamer (80-2461)



FFN 4.1 mm Reamer (80-2462)

Ulna Nail 2 Surgical Technique [continued]

7 Ulna Nail to Base Plate Attachment

Place the FFN Locking Bolt (80-2452) through the barrel mount on the FFN Base Plate (80-2448) (Figure 13).

Line the nail up with the alignment tab and use the FFN Locking Bolt to secure the ulna nail to the FFN Base Plate. Securely tighten the bolt by using the FFN T15 Hexalobe Driver (80-3619) or any of the slots in the FFN Handle (80-3885).

Note: The bow of the nail should angle away from the markings and the assembly posts on the base plate.

Optional: To attach the optional FFN Handle, insert the FFN Bolt (80-3886) into the FFN Handle and rotate clockwise until seated (Figure 15). Thread the combined FFN Bolt and FFN Handle into either of the threaded holes in the FFN Base Plate (Figure 14). The FFN Bolt has a retaining feature that prevents the bolt from falling out of the FFN Handle.

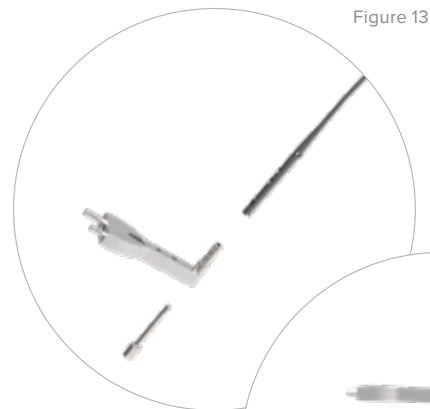


Figure 13

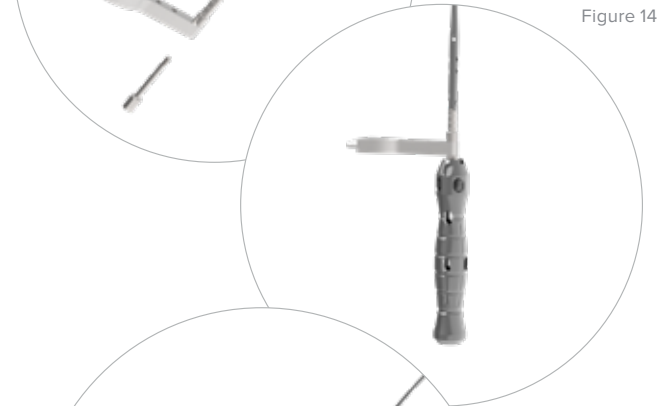


Figure 14



Figure 15

8 Targeting Guide Assembly

Attach the FFN Primary Targeting Guide (80-2454) to the FFN Base Plate (80-2448) by sliding the two posts on the FFN Base Plate into the hole and slot of the FFN Primary Targeting Guide.

Insert the FFN Locking Knob (80-2499) through the proximal center hole of the FFN Primary Targeting Guide. Rotate the knob clockwise to tighten the FFN Primary Targeting Guide to the FFN Base Plate (Figure 16).

Note: The posts of the FFN Base Plate only allow for one assembly orientation and are not side-specific.

Note: The FFN Primary Targeting Guide sits posterior to the ulna. The targeting assembly may be rotated slightly when placing screws to target the olecranon and/or coronoid processes.



Figure 16

FFN Locking Bolt
(80-2452)FFN Base Plate
(80-2448)FFN T15 Hexalobe
Driver
(80-3619)FFN Handle
(80-3885)FFN Bolt
(80-3886)FFN Primary
Targeting Guide
(80-2454)FFN Locking Knob
(80-2499)

Ulna Nail 2 Surgical Technique [continued]



Figure 17

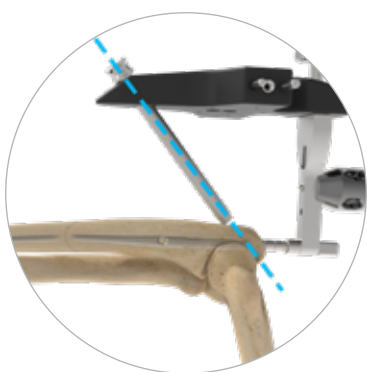


Figure 18

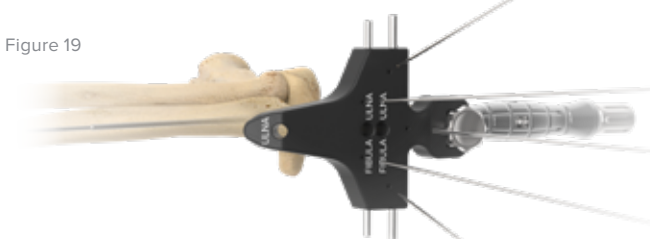


Figure 19

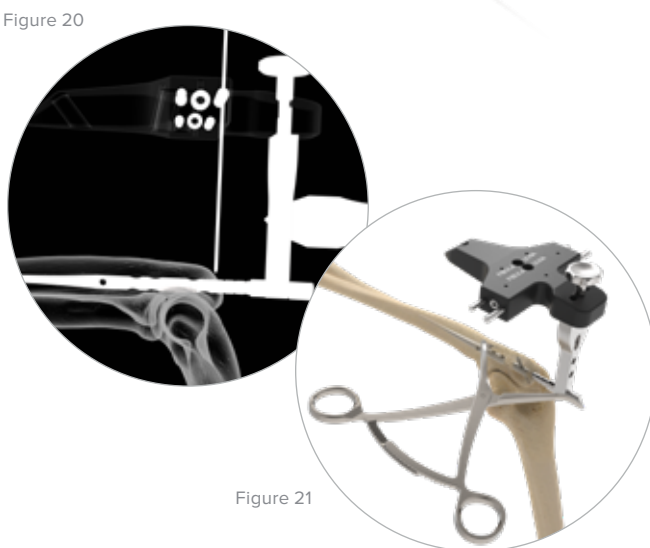


Figure 21

9 Nail Insertion and Positioning

Ensure the fracture is reduced and insert the selected ulna nail into the reamed bone so the tip of the nail is aligned with the tip of the olecranon (Figures 17 and 21). Insert the FFN 3.5 mm Cannula (80-2476) into the angled targeting hole on the targeting guide, labeled “Ulna” (Figure 18).

A lateral fluoroscopic view should be obtained to verify that the trajectory of the most proximal screw will target the tip of the olecranon process and that the proximal end of the nail has been inserted below the surface of the bone. Glide the nail tip past the fracture site and down to the distal metaphysis. The ulna nail should pass easily down the canal without impaction. If resistance is met, the nail should be withdrawn, and the canal checked again with the appropriate reamer.

The FFN Handle (80-3885) may be used to internally or externally rotate to ensure alignment. The handle may also be removed if desired.

Insert the 2.0 mm x 9" ST Guide Wires (WS-2009ST) through the targeting guide for additional stability; however they will need to be removed when retracting the ulna nail for optional Tip-Loc™ insertion in step 9C (Figure 19). The center-most proximal K-wire hole identifies the junction of the ulna nail and the FFN Base Plate (80-2448) (Figure 20).

Note: If using an optional FFN End Cap (4014-0XXX), locate the notches on the barrel section of the FFN Base Plate. These notches are viewable under fluoroscopy or direct visualization and indicate the approximate FFN End Cap length. Insert the nail to the desired depth and confirm the end cap length from the +0.4 mm, +5 mm, +10 mm, or +15 mm.

Optional FFN End Caps

FFN +0.4 mm End Cap (4014-0600)

FFN +5 mm End Cap (4014-0705)

FFN +10 mm End Cap (4014-0710)

FFN +15 mm End Cap (4014-0715)

Warning: Ensure that the screws will avoid the joint space.

Note: To use the optional Tip-Loc to lock the tip of the nail, allowing two points of fixation, continue to Step 9A. If not, proceed to Step 10.



FFN 3.5 mm Cannula (80-2476)



FFN Handle (80-3885)



2.0 mm x 9" ST Guide Wire (WS-2009ST)



FFN Base Plate (80-2448)



FFN End Cap (4014-0XXX)

Ulna Nail 2 Surgical Technique [continued]

9A Optional Tip-Loc™ Incision and Clamp Placement

With the ulna nail inserted to the correct depth, identify the nail tip, which narrows to 2.6 mm in diameter in the last 1.5" of the nail, under fluoroscopy and mark the center of that region on the skin. Use this mark as the center point for a 2–3 cm incision along the medial ulna (Figure 22). Bluntly dissect around the ulna to make room for the clamp arms.

Assemble the Tip-Loc Rotary Cannula (80-3760) into the central hole of the Tip-Loc Clamp (80-3891) by aligning the insert/remove arrows with the arrow on the clamp. Once the cannula is engaged into the clamp, rotate it 180° in either direction until the arrow aligns with the 0 mm line (Figures 23 and 24).

Place the radiolucent clamp arms through the incision around the bone with the clamp handles pointing distally (Figure 26).

Note: It is recommended to place at least one of the two provided 2.0 mm Short Guide Wires (35-0023) through either K-wire hole near the clamp cannula into the bone to provide additional stability to the clamp.

Note: Care should be taken to ensure that the rotating cannula sits perpendicular to the long axis of the bone and flush on the bone.

Note: The 120 mm length ulna nail in all three diameters does not accept the Tip-Loc Bushing & Set Screw as these short nails were designed for more proximal ulna fractures in which distal locking is not necessary.

Figure 22

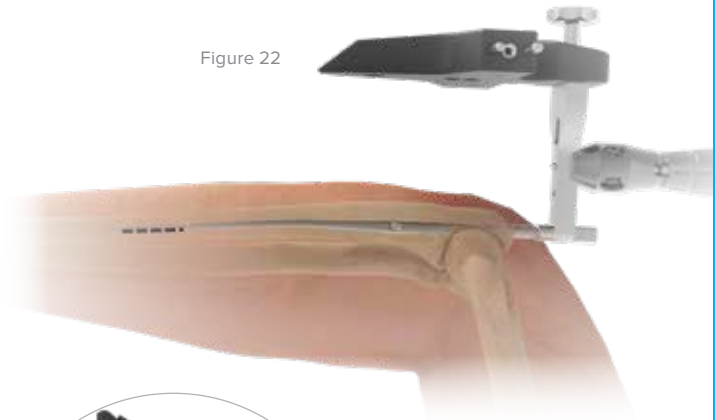


Figure 23

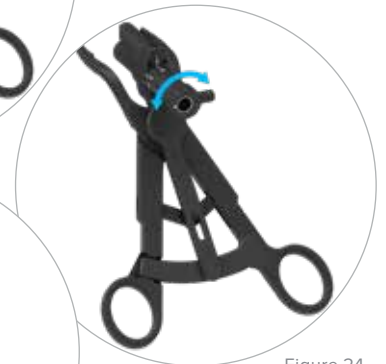


Figure 24



Figure 25

Figure 26



Tip-Loc Rotary
Cannula
(80-3760)



Tip-Loc Clamp
(80-3891)



2.0 mm Short
Guide Wire
(35-0023)

Ulna Nail 2 Surgical Technique [continued]

Figure 27

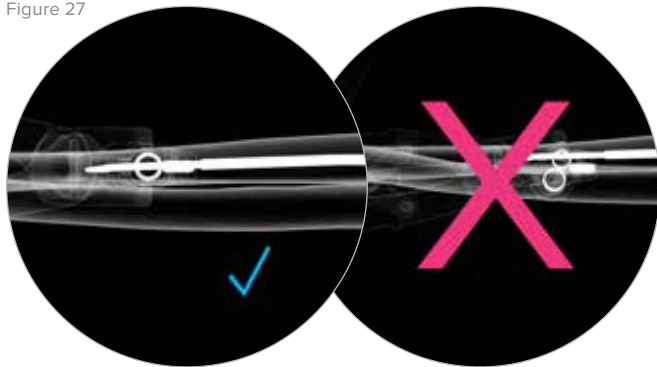


Figure 28

9B Optional Tip-Loc™ Ulna Nail Targeting

Under fluoroscopy, use the circle-circle technique to align the two radiopaque rings on the proximal and distal end of the rotating cannula within the Tip-Loc Clamp (80-3891) to provide visualization down the cannula (Figures 27 and 28).

If the tip of the ulna nail is not positioned in the center of the cannula, rotate the cannula in 1 mm increments until the tip of the nail is clearly centrally located within the two circles.

- ▶ **Clockwise Rotation** Shifts cannula right
- ▶ **Counterclockwise Rotation** Shifts cannula left

9C Optional Tip-Loc Drilling & Preparation

Once the tip of the ulna nail is targeted through the cannula within the Tip-Loc Clamp (80-3891), retract the ulna nail for subsequent drilling until the tip of the ulna nail is no longer visible through the cannula (Figure 29).

To drill for the body of the Tip-Loc Bushing (3017-650XX), insert the FFN Near Cortex Drill (80-3696) through the cannula within the Tip-Loc Clamp and drill under power until it bottoms out with the back of the cannula (Figure 30). Remove the FFN Near Cortex Drill and insert the FFN Far Cortex Drill (80-3697) through the cannula within the Tip-Loc Clamp. Drill the 2 mm trocar tip through the far cortex and ream the inside region of the far cortex with the FFN Far Cortex Drill (Figure 31).

The proper Tip-Loc Bushing length is determined when the FFN Far Cortex Drill laser marks are flush against the back of the cannula within the Tip-Loc Clamp (Figure 32). The Tip-Loc Bushings are available in lengths ranging from 6 mm–16 mm, with 1 mm increments.

The correct bushing length can also be identified under fluoroscopy by identifying where the notches on the Far Cortex Drill are in relation to the near cortex. The notches are 2 mm apart and correspond to the associated Tip-Loc Bushing sizes. The most distal notch, closest to the drill tip, corresponds to the 6 mm Tip-Loc Bushing size, and so on.

Figure 29

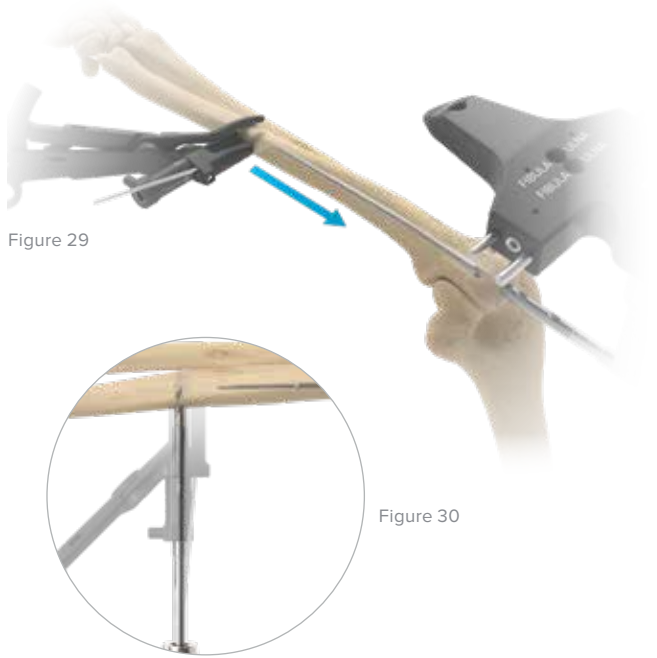


Figure 30



Tip-Loc Clamp
(80-3891)



Tip-Loc Bushing
(3017-650XX)



FFN Near Cortex
Drill
(80-3696)



FFN Far Cortex
Drill
(80-3697)

Ulna Nail 2 Surgical Technique [continued]

Tip-Loc™ Bushing & Set Screw Kit	Part number
Tip-Loc Bushing & Set Screw, 6 mm	47-0006-S
Tip-Loc Bushing & Set Screw, 7 mm	47-0007-S
Tip-Loc Bushing & Set Screw, 8 mm	47-0008-S
Tip-Loc Bushing & Set Screw, 9 mm	47-0009-S
Tip-Loc Bushing & Set Screw, 10 mm	47-0010-S
Tip-Loc Bushing & Set Screw, 11 mm	47-0011-S
Tip-Loc Bushing & Set Screw, 12 mm	47-0012-S
Tip-Loc Bushing & Set Screw, 13 mm	47-0013-S
Tip-Loc Bushing & Set Screw, 14 mm	47-0014-S
Tip-Loc Bushing & Set Screw, 15 mm	47-0015-S
Tip-Loc Bushing & Set Screw, 16 mm	47-0016-S

Note: The FFN Far Cortex Drill (80-3697) has a trocar tip designed to drill through the far cortex, but the transition to the bigger diameter is designed to be blunt without sharp cutting features. This will provide a hard stop when it reaches the far cortex, indicating that the surgeon has drilled far enough and allowing some reaming to prepare the inside canal for the bushing.

Caution: Take care not to penetrate the far cortex with the FFN Far Cortex Drill.

Note: If needed, a Cortex Awl w/Quick Release (80-3795) can be attached to the Quick Release T-Handle (MS-T1212) and inserted by hand through the cannula within the Tip-Loc Clamp (80-3891) to further clear the site for the bushing.

Note: If the Tip-Loc Bushing measurement is between the 2 mm sizing increments, select the larger of the two sizes. The intention of the Tip-Loc Bushing is to achieve bicortical fixation within the ulna.

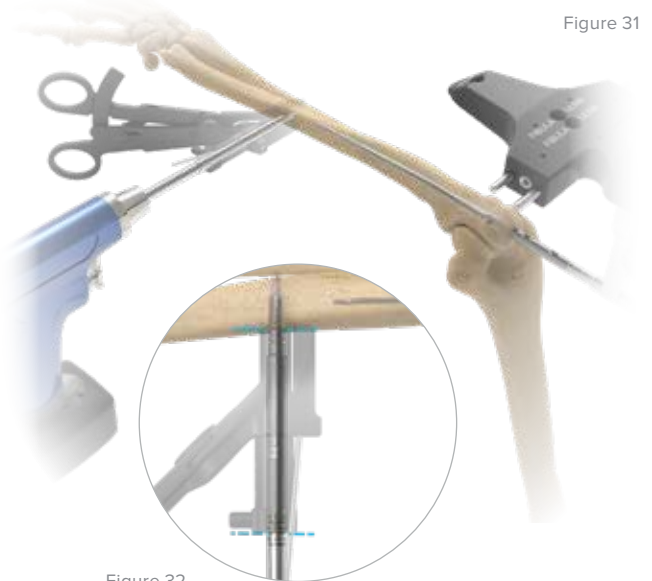


Figure 31

Figure 32



Tip-Loc Bushing & Set Screw Kit, (47-00XX-S)



FFN Far Cortex Drill (80-3697)



Cortex Awl w/Quick Release (80-3795)



Quick Release T-Handle (MS-T1212)



Tip-Loc Clamp (80-3891)

Ulna Nail 2 Surgical Technique [continued]

Figure 33

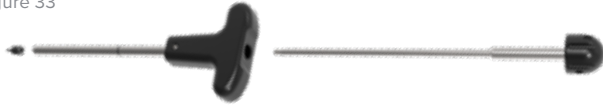


Figure 34



Figure 35

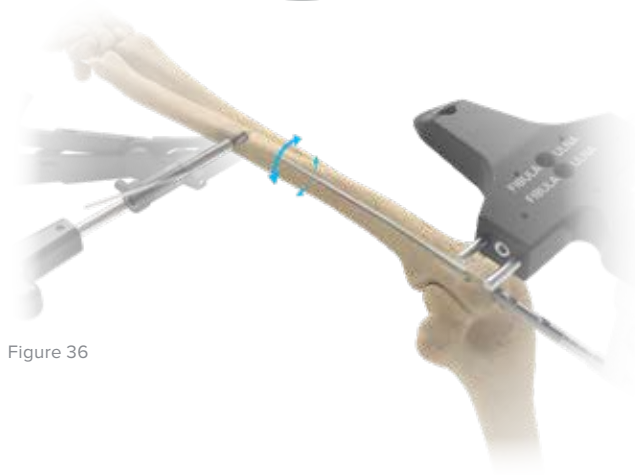


Figure 36

9D Optional Tip-Loc™ Bushing Insertion

To attach the selected Tip-Loc Bushing (3017-65XXX-S), place the Tip-Loc Coupler Attachment (80-2484) through the Tip-Loc Bushing Coupler Handle (80-2483) (Figure 33). Thread the selected length Tip-Loc Bushing onto the end of the threaded Tip-Loc Bushing Coupler Handle and ensure that the bushing recess notches engage with the notches in the Tip-Loc Coupler Attachment.

Place the Tip-Loc Bushing Coupler Driver and attached bushing through the cannula within the Tip-Loc Clamp (Figure 34). Thread the Tip-Loc Bushing into the bone until the marking on the Tip-Loc Coupler shaft is flush with the back of the cannula within the Tip-Loc Clamp (Figure 35). Depending on bone quality, the surgeon may feel a semi-solid end stop when the bushing reaches the far cortex.

Align the Tip-Loc Bushing Coupler Handle so that the flat surfaces are parallel with the ulna nail. This will orient the opening of the Tip-Loc Bushing towards the tip of the ulna nail.

Advance the ulna nail to the correct depth and through the Tip-Loc Bushing. Rotate the Tip-Loc Bushing Coupler Handle in either direction to help the bushing properly accept the nail tip (Figure 36).

Note: There is a small offset "kick" in the most distal 9.5 mm of the ulna nail to assist in targeting and advancing the nail tip through the bushing. If the nail tip is not easily advancing through the bushing, the ulna nail and FFN Base Plate (80-2448) can be rotated to take advantage of the kick to align the very tip of the nail with the bushing opening.

Note: If the ulna nail fails to advance through the bushing opening, the nail tip kick can be manually increased during surgery to create a bigger offset.

Disengage the Tip-Loc Coupler Attachment from the Tip-Loc Bushing by rotating it counter-clockwise, but leave the coupler handle in place to aid in set screw insertion.



Tip-Loc Bushing
(3017-650XX)



Tip-Loc Coupler
Attachment
(80-2484)



Tip-Loc Bushing
Coupler Handle
(80-2483)



FFN Base Plate
(80-2448)

Ulna Nail 2 Surgical Technique [continued]

Note: It is recommended to assess the successful insertion of the ulna nail through the bushing by taking an oblique view fluoroscopic image and also rotating the coupler handle. The nail has not advanced through the Tip-Loc™ Bushing (3017-650XX) if the handle can rotate more than 45 degrees (Figures 37 and 38). In this case retract the nail and use the technique described above to advance the nail through the bushing opening.

Note: It is recommended to insert the remaining 3.5 mm Nonlocking Hexalobe Screws (30-02XX) and 3.5 mm Headless Hexalobe Screws (3018-470XX) PRIOR to placing the Tip-Loc Set Screw (3017-250XX) in Step 10D to ensure all screw trajectories are correct and adjustments have been made for rotation and length. However, the surgeon may choose to lock the tip at this point to allow for compression of the fracture site by pulling on the nail attachment. To lock the tip with the set screw, proceed to Step 10D. Ensure that bone alignment and screw trajectories are correct before locking the bushing and set screw.

Figure 37

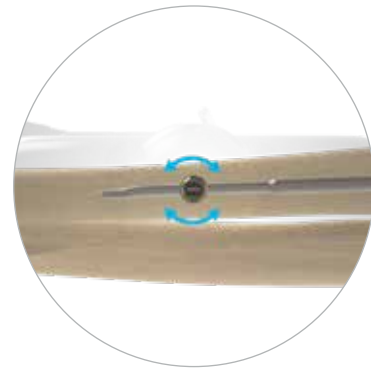


Figure 38



3.5 mm Nonlocking
Hexalobe Screws
(30-02XX)



3.5 mm Headless
Hexalobe Screws
(3018-470XX)



Tip-Loc Bushing
(3017-650XX)



Tip-Loc Set Screw
(3017-250XX)

Ulna Nail Surgical Technique [continued]

10 Posterior / Anterior Screw Placement

It is recommended to place at least one P/A screw. Place the most proximal screw first to ensure correct placement within the olecranon process, followed by one of the two options of the coronoid process screws. Be sure to check for sufficient bone purchase and no joint space obstruction.

Place the FFN 3.5 mm Cannula (80-2476) through the angled hole of the FFN Primary Targeting Guide (80-2454) labeled “Ulna.” Make a small stab incision where the FFN 3.5 mm Cannula meets the skin, then advance the cannula until it rests against the bone. Insert the FFN 2.8 mm Drill Guide (80-2505) into the FFN 3.5 mm Cannula (Figure 39).

Use the FFN 2.8 mm Drill (80-2471) through the FFN 2.8 mm Drill Guide, drilling through one cortex (Figure 40). Take care not to penetrate the far cortex.

Once the desired depth is achieved, read the laser marks on the drill as it aligns with the back of the FFN 2.8 mm Drill Guide to select the appropriate screw length.

Choose from either a 3.5 mm Nonlocking Hexalobe Screw (30-02XX) or 3.5 mm Headless Hexalobe Screw (3018-470XX). Remove the FFN 2.8 mm Drill Guide and place the selected screw with the FFN T15 Hexalobe Driver (80-3619) and the Medium Ratcheting Driver Handle (80-0663) (Figure 43). Take care not to over-torque the screw.

Note: Specifically for the 120 mm Ulna Nails: After the proximal olecranon screw has been placed, it is recommended to provide compression between the nail and the distal ulna to ensure the proximal fragment is reduced.

Repeat the steps above to insert at least one screw through the two remaining holes in the FFN Primary Targeting Guide and into the coronoid process (Figures 44-47). Check for proper screw placement under fluoroscopy.

If no L/M screws are being placed (Steps 10A and 10B), the Primary Targeting Guide can be removed.

Note: The FFN Depth Gauge (80-2468) can be used in place of the laser marks on the FFN 2.8 mm Drill to identify screw lengths (Figures 41 and 42).

Figure 39

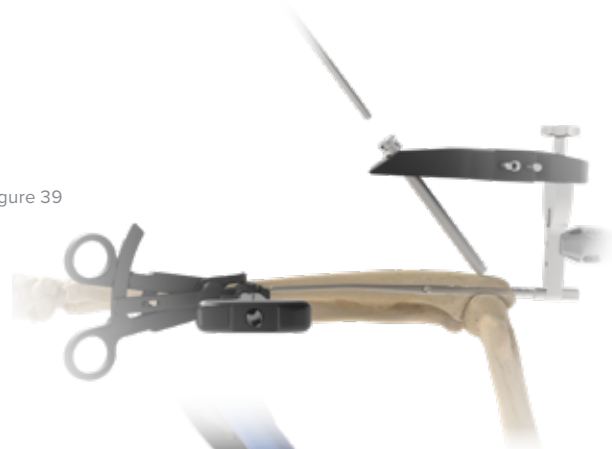


Figure 40



Figure 41

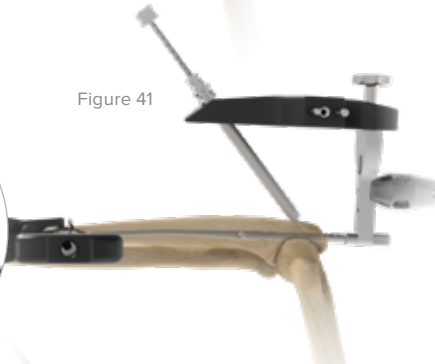


Figure 42



Figure 43



FFN 3.5 mm Cannula (80-2476)



FFN Primary Targeting Guide (80-2454)



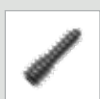
FFN 2.8 mm Drill Guide (80-2505)



FFN 3.5 mm Cannula (80-2476)



3.5mm Nonlocking Hexalobe Screw (30-02XX)



3.5 mm Headless Hexalobe Screw (3018-470XX)



FFN T15 Hexalobe Driver (80-3619)



Medium Ratcheting Driver Handle (80-0663)

Ulna Nail Surgical Technique [continued]

Note: It may be necessary to subtract 2 mm from the identified length when using a 3.5 mm Headless Hexalobe Screw (3018-470XX) or when drilling at an angle, depending on the final seating depth of the screw within the bone.

Note: An FFN Headless Screw Countersink (80-3769) is available for the 3.5 mm Headless Hexalobe Screws if needed.

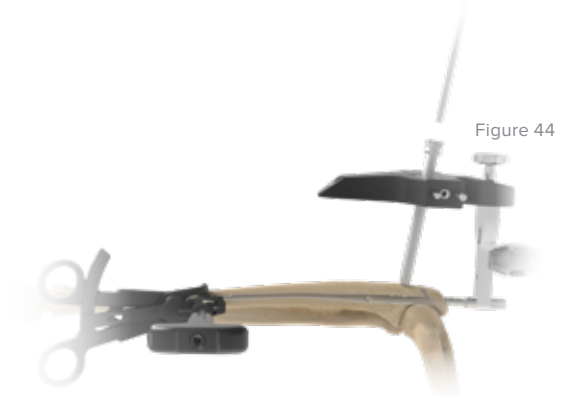


Figure 44

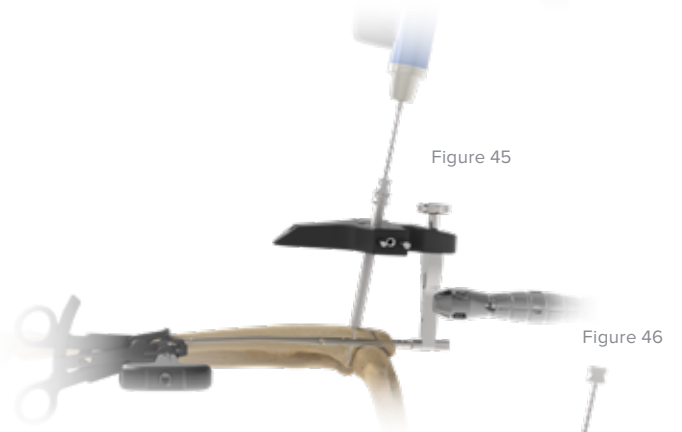


Figure 45



Figure 46



Figure 47



FFN Depth Gauge
(80-2468)



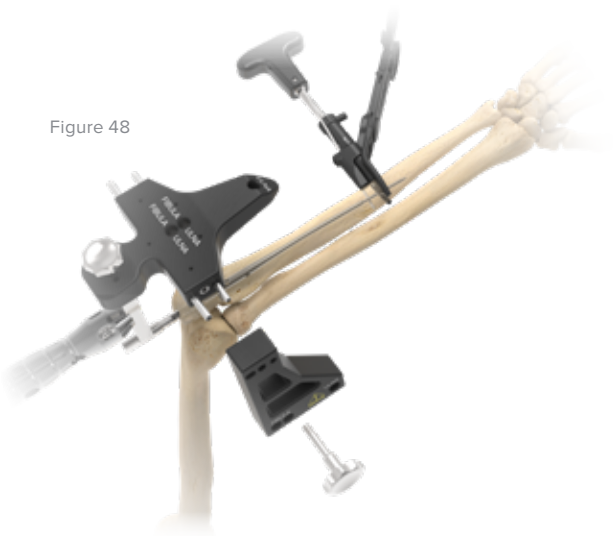
3.5 mm Headless
Hexalobe Screw
(3018-470XX)



FFN Headless
Screw Countersink
(80-3769)

Ulna Nail 2 Surgical Technique [continued]

Figure 48



10A Optional Secondary Targeting Guide Assembly

To place lateral/medial screws, attach the FFN Secondary Targeting Guide (80-2456) by sliding it over the extended posts on the FFN Primary Targeting Guide (80-2454). Secure the FFN Secondary Targeting Guide onto the FFN Primary Targeting Guide with an FFN Locking Knob (80-2499) (Figure 48).

Note: The “nerve” caution symbol on the FFN Secondary Targeting Guide is intended to be a reminder to avoid the ulnar nerve and not drill through the far cortex of the olecranon process.



FFN Secondary Targeting Guide (80-2456)



FFN Primary Targeting Guide (80-2454)



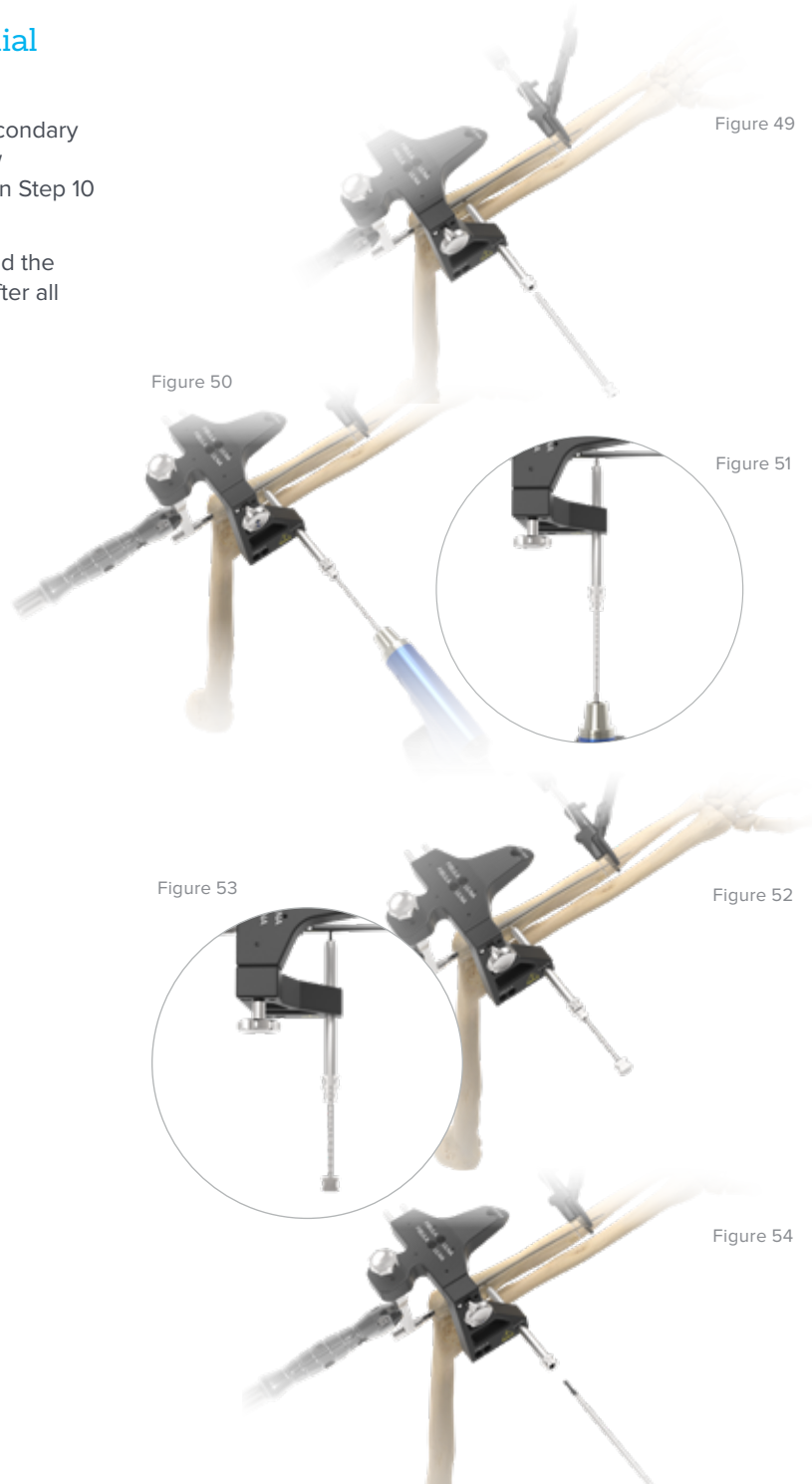
FFN Locking Knob (80-2499)

Ulna Nail 2 Surgical Technique [continued]

10B Optional Lateral/Medial Screw Placement

Lateral/medial screws are placed using the FFN Secondary Targeting Guide (80-2456). For lateral/medial screw placement, utilize the screw placement technique in Step 10 (Figures 49-54).

Both the FFN Primary Targeting Guide (80-2454) and the FFN Secondary Targeting Guide can be removed after all proximal screws have been placed.



FFN Primary Targeting Guide (80-2454)



FFN Secondary Targeting Guide (80-2456)

Ulna Nail 2 Surgical Technique [continued]

10C Optional End Cap Placement

End caps can be used to extend the nail length and may assist in removal by protecting the nail threading from bony ongrowth.

Use the notches on the barrel of the FFN Base Plate (80-2448) at the tail of the nail to identify the correct end cap length.

Disengage the FFN Locking Bolt (80-2452) from the ulna nail using either the slots within the FFN Handle (80-3885) or the FFN T15 Hexalobe Driver (80-3619).

Attach the desired FFN End Cap (4014-0XXX) to the appropriate Hexalobe Driver Tip found in the table below.

Hexalobe Driver Size	FFN End Cap Sizes
T8 Hexalobe Driver (80-2895)	FFN +.4 mm End Cap (4014-0600)
T15 Hexalobe Driver (80-3619)	FFN +5 mm End Cap (4014-0705)
T15 Hexalobe Driver (80-3619)	FFN +10 mm End Cap (4014-0710)
T15 Hexalobe Driver (80-3619)	FFN +15 mm End Cap (4014-0715)

Thread the end cap into the tail of the nail using the associated driver tip and the Medium Ratcheting Driver Handle (80-0663) (Figure 55).

Ensure the nail tail and FFN End Cap construct are not left proud in the bone (Figure 56).



Figure 55



Figure 56



FFN Base Plate (80-2448)



FFN Locking Bolt (80-2452)



FFN Handle (80-3885)



FFN T15 Hexalobe Driver (80-3619)



FFN End Cap (4014-0XXX)



Medium Ratcheting Driver Handle (80-0663)

Ulna Nail 2 Surgical Technique [continued]

10D Optional Tip-Loc™ Set Screw

Before locking down the tip of the nail, ensure the fracture is well reduced and the placement of the screws is correct.

Insert the Tip-Loc Set Screw (3017-250XX) that corresponds to the Tip-Loc Bushing (3017-650XX), using the FFN T8 Hexalobe Driver (80-2895) with the Medium Ratcheting Driver Handle (80-0663), through the coupler handle shaft into the bushing; and tighten the set screw until a solid stop is felt (Figure 57). The groove at the tail end of the driver lines up with the end of the handle when the bushing is fully inserted and the set screw is flush with the bushing (Figure 58).

Caution: Do not use the Quick Release T-Handle (MS-T1212) to implant the Tip-Loc Bushing & Set Screw, as this can provide too much torque (Figure 59).



Figure 57

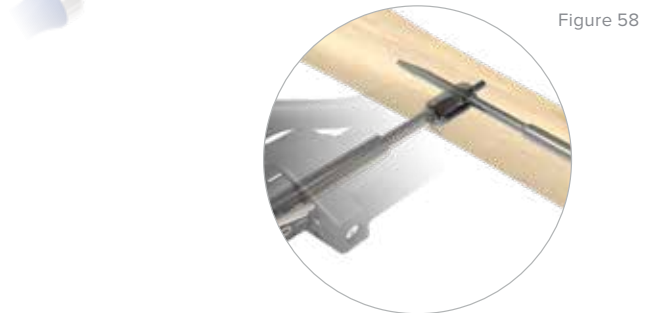


Figure 58



Figure 59



Tip-Loc Set Screw
(3017-250XX)



Tip-Loc Bushing
(3017-650XX)



FFN T8 Hexalobe
Driver
(80-2895)



Medium
Ratcheting Driver
Handle
(80-0663)

Ulna Nail 2 Surgical Technique [continued]

Figure 60



10E Optional Tip-Loc™ Clamp Removal and Closure

With the Tip-Loc Set Screw (3017-250XX) engaged, remove the Tip-Loc Bushing Coupler Handle (80-2483) from the cannula within the Tip-Loc Clamp (80-3891) (Figure 60). Remove any of the 2.0 mm Short Guide Wires (35-0023) that may have been placed through the Tip-Loc Clamp.

Disengage the Tip-Loc Clamp's jaws from the ulna and remove from the incision site (Figures 61 and 62).

Close the surgical site based on surgeon preference.

Figure 61



Figure 62



Tip-Loc Set Screw
(3017-250XX)



Tip-Loc Bushing
Coupler Handle
(80-2483)



Tip-Loc Clamp
(80-3891)



2.0 mm Short
Guide Wire
(35-0023)

Ulna Nail 2 Surgical Technique [continued]

11 Closure and Postoperative Protocol

With the nail construct implanted and the targeting guides removed, begin closure of the incisions based on the surgeon's preferred method (Figure 63).

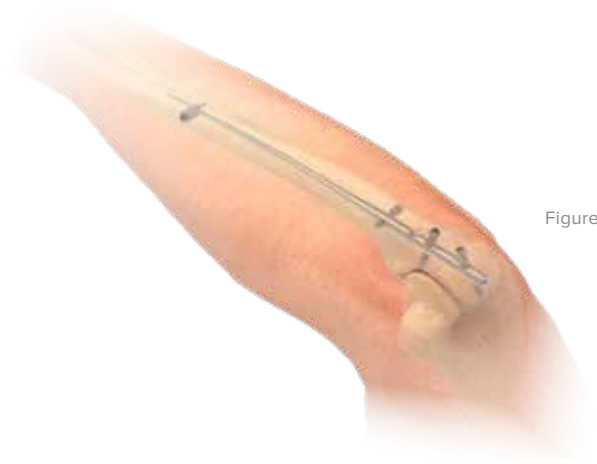


Figure 63

Ulna Nail 2 Removal Surgical Technique

Figure 1



Confirm the overall nail construct under fluoroscopy. Be sure to check the location of screws, and determine if there are optional end caps or an optional Tip-Loc Bushing and Set Screw implanted.

1 Removal of Optional End Cap

Expose the proximal end of the implant as confirmed under fluoroscopy (Figure 1). Drill toward the ulna nail implant tail to create a path for the nail to exit. Then using curettes, rongeurs, osteotomes, or a combination, open the canal so the proximal end of the nail is freely accessible.

If an end cap is present, it must be removed before the nail can be explanted (Figure 2).

If the end cap is the +5 mm, +10 mm, or +15 mm size (4014-0705, 4014-0710, 4014-0715), use the FFN T15 Hexalobe Driver (80-3619) and a Medium Ratcheting Driver Handle (80-0663) to remove the end cap from the nail.

For an FFN +.4 mm End Cap (4014-0600), which is flush with the nail, use the FFN T8 Hexalobe Driver (80-2895) and a Medium Ratcheting Driver Handle to remove the end cap from the nail.

Note: For the +5, +10, and +15 End Caps, the 3.0 mm Easyout, QR (80-0601) can be used if the T15 Hexalobe Driver does not engage the end cap fully. For the +.4 mm End Cap (4014-0600), the 2.0 mm Easyout, QR (80-0599) can be used if the FFN T8 Hexalobe Driver does not engage the end cap fully.

Figure 2



FFN End Cap
(4014-0XXX)



FFN T15 Hexalobe
Driver
(80-3619)



Medium
Ratcheting Driver
Handle
(80-0663)



FFN T8 Hexalobe
Driver
(80-2895)



3.0 mm Easyout,
QR
(80-0601)



2.0 mm Easyout,
QR
(80-0599)

Ulna Nail 2 Removal Surgical Technique [continued]

2 Screw Removal

The most proximal screw should be removed first. Confirm the proximal screw location(s) under fluoroscopy and use a standard soft-tissue dissection method to expose the screw head(s). Use the FFN T15 Hexalobe Driver (80-3619) and the Medium Ratcheting Driver Handle (80-0663) to remove the screw (Figure 3).

Before removing additional screws, insert the FFN Bolt (80-3886) into the threaded back end of the nail (Figure 4). Use the same technique as described above to remove any additional screws (Figure 5). Under fluoroscopy (Figure 5) ensure no screws are still engaged in the nail prior to nail removal.

Note: It is recommended to engage the Tip-Loc Coupler Attachment through the Tip-Loc Bushing Coupler Handle with the nail in place to provide more stability.



Figure 3



Figure 4



Figure 5



FFN T15 Hexalobe Driver
(80-3619)



Medium Ratcheting Driver Handle
(80-0663)



FFN Bolt
(80-3886)

Ulna Nail 2 Removal Surgical Technique [continued]

Figure 6



3 Removal of Optional Tip-Loc™ Set Screw

Identify the Tip-Loc Bushing (3017-650XX) and Set Screw (3017-250XX) under fluoroscopy and mark the skin as the center point for an incision to expose the bushing and set screw.

To remove the Tip-Loc Set Screw, connect the FFN T8 Hexalobe Driver (80-2895) to the Medium Ratcheting Driver Handle (80-0663) and disengage the set screw by turning counterclockwise.

Note: The nail must be removed prior to removing the Tip-Loc Bushing.

Figure 7



Tip-Loc Bushing
(3017-650XX)



Tip-Loc Set Screw
(3017-250XX)



FFN T8 Hexalobe
Driver
(80-2895)



Medium
Ratcheting Driver
Handle
(80-0663)

Ulna Nail 2 Removal Surgical Technique [continued]

4 Nail Removal

With the FFN Bolt (80-3886) threaded in the end of the ulna nail (see removal Step 2) manually remove the nail out of the canal (Figure 8). If additional force is needed, use the FFN Multiple Contact Hammer (80-3966) to backslap on the FFN Bolt to remove the nail.

Note: Removal of soft-tissue or bony ongrowth may be necessary. Using a Sharp Hook (PL-CL06) may aid in this removal.

Note: The 3.0 mm Easyout, QR (80-0601) can be used to remove the nail if the FFN Bolt does not fully engage.

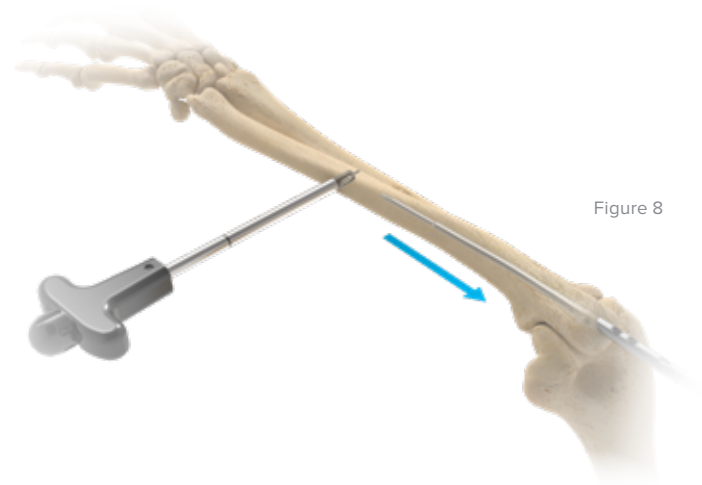


Figure 8

5 Optional Tip-Loc™ Bushing Removal

To remove the Tip-Loc Bushing (3017-650XX), insert the Tip-Loc Coupler Attachment (80-2484) through the Tip-Loc Bushing Coupler Handle (80-2483) and remove the bushing from the bone (Figure 9).

Note: The 3.0 mm Easyout, QR (80-0601) can be used to remove the Tip-Loc Bushing if the Tip-Loc Coupler Attachment & Tip-Loc Bushing Coupler Handle do not fully engage.

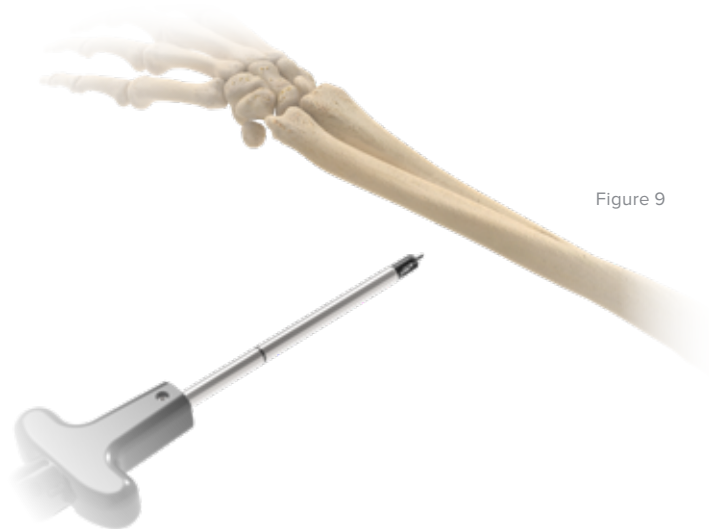


Figure 9



FFN Bolt
(80-3886)



FFN Multiple Contact Hammer
(80-3966)



Sharp Hook
(PL-CL06)



3.0 mm Easyout, QR
(80-0601)



Tip-Loc Bushing
(3017-650XX)



Tip-Loc Coupler Attachment
(80-2484)



Tip-Loc Bushing Coupler Handle
(80-2483)

Ordering Information

Tray Components

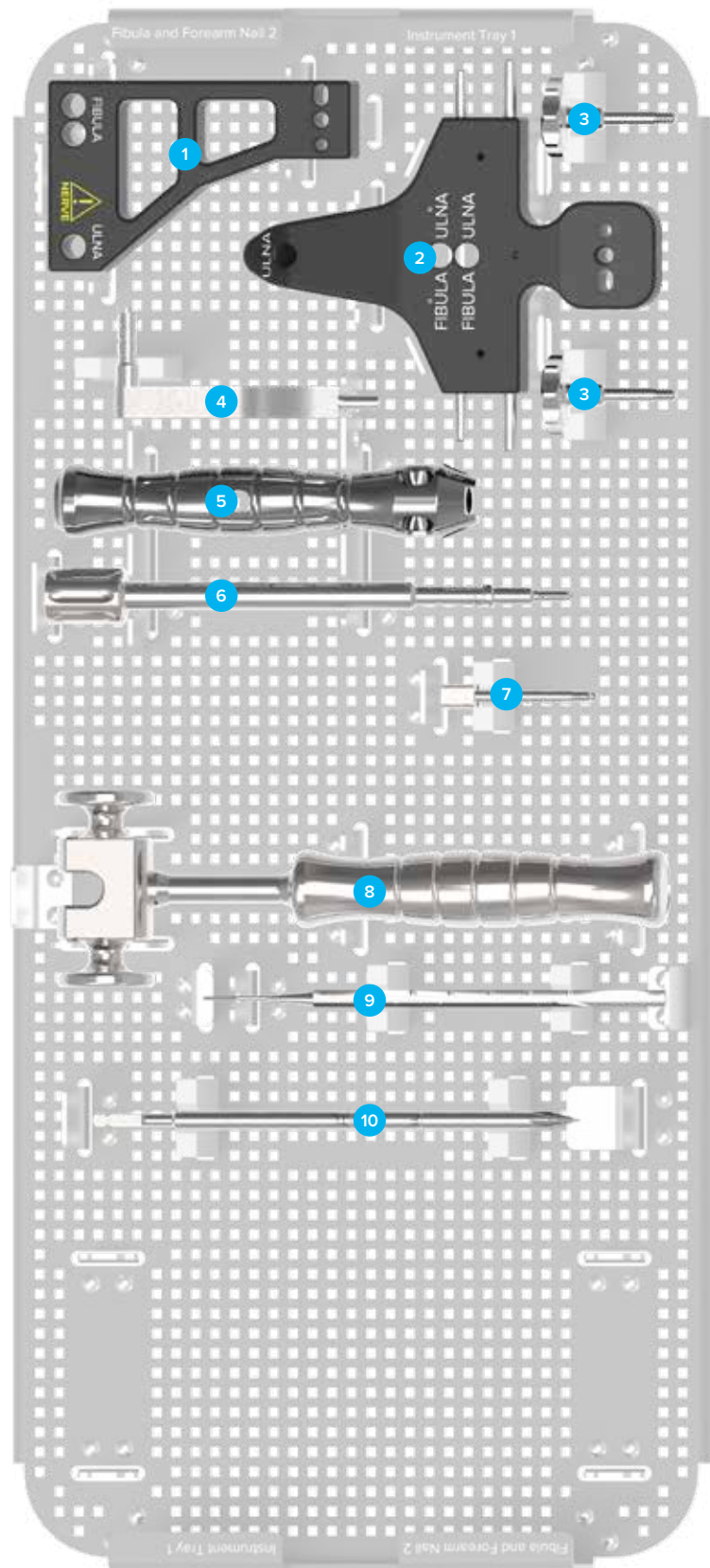
Instrumentation

1	FFN Secondary Targeting Guide	80-2456	6	FFN Bolt	80-3886
2	FFN Primary Targeting Guide	80-2454	7	FFN Locking Bolt	80-2452
3	FFN Locking Knob	80-2499	8	FFN Multiple Contact Hammer	80-3966
4	FFN Base Plate	80-2448	9	Sharp Hook	PL-CL06
5	FFN Handle	80-3885	10	Cortex Awl w/Quick Release	80-3795

Sterile Tray Components

Instrumentation

Cortex Awl w/Quick Release	80-3795-S
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Ordering Information [continued]

Tray Components

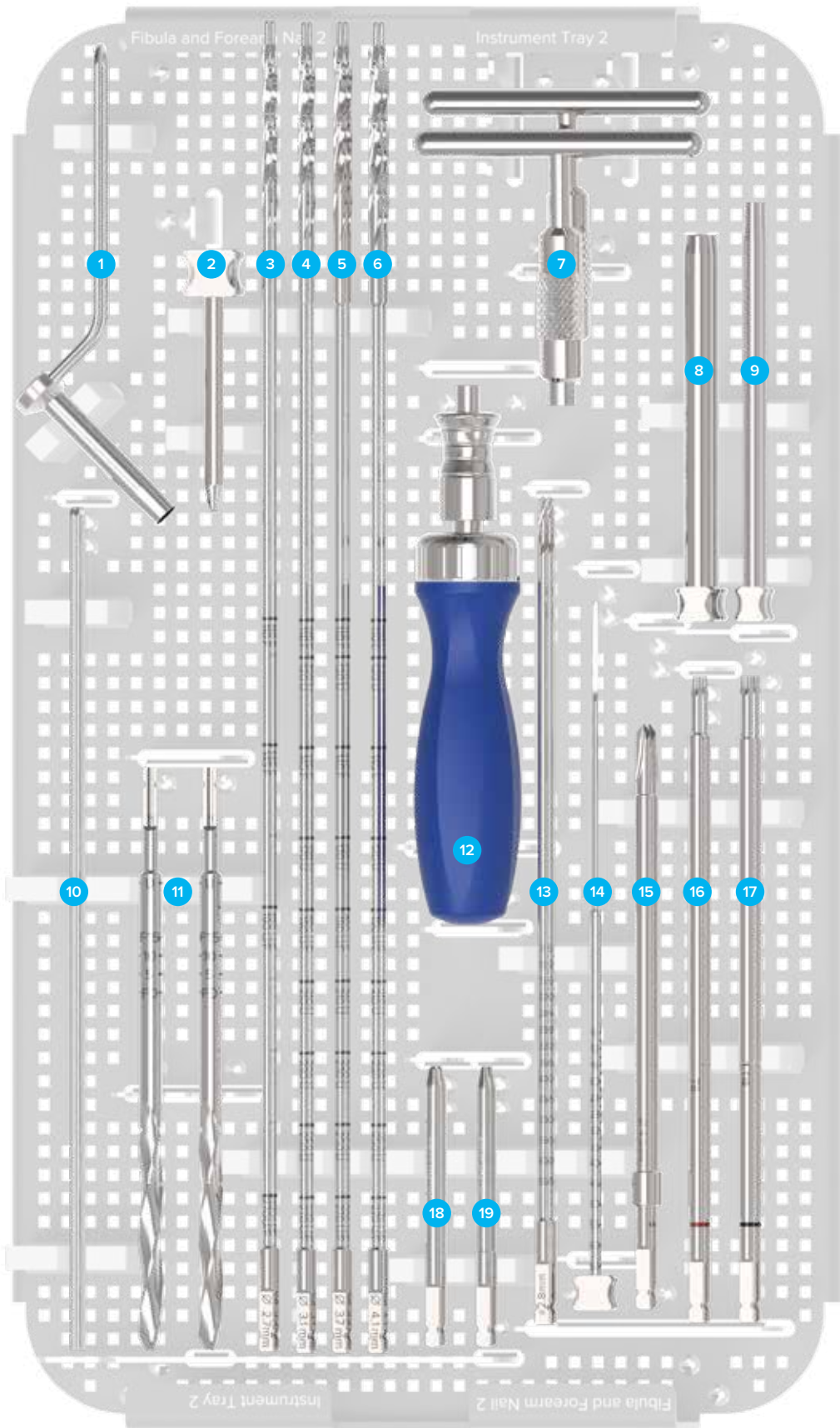
Instrumentation

1	FFN Soft-Tissue Protector	80-2896	11	FFN 6.5 mm Drill	80-4039
2	FFN Guide Wire Probe	80-2900	12	Medium Ratcheting Driver Handle	80-0663
3	FFN 2.7 mm Reamer	80-2459	13	FFN 2.8 mm Drill	80-2471
4	FFN 3.1 mm Reamer	80-2460	14	FFN Depth Gauge	80-2468
5	FFN 3.7 mm Reamer	80-2461	15	FFN Headless Screw Countersink	80-3769
6	FFN 4.1 mm Reamer	80-2462	16	FFN T8 Hexalobe Driver	80-2895
7	Quick Release T-Handle	MS-T1212	17	FFN T15 Hexalobe Driver	80-3619
8	FFN 3.5 mm Cannula	80-2476	18	3.0 mm Easyout, Quick Release	80-0601
9	FFN 2.8 mm Drill Guide	80-2505	19	2.0 mm Easyout, Quick Release	80-0599
10	2.0 mm x 9" ST Guide Wire	WS-2009ST			

Sterile Tray Components

Instrumentation

FFN 6.5 mm Drill	80-4039-S	FFN 2.8 mm Drill	80-2471-S
2.0 mm x 9" ST Guide Wire	WS-2009ST-S	FFN Headless Screw Countersink	80-3769-S



Ordering Information [continued]

Tray Components

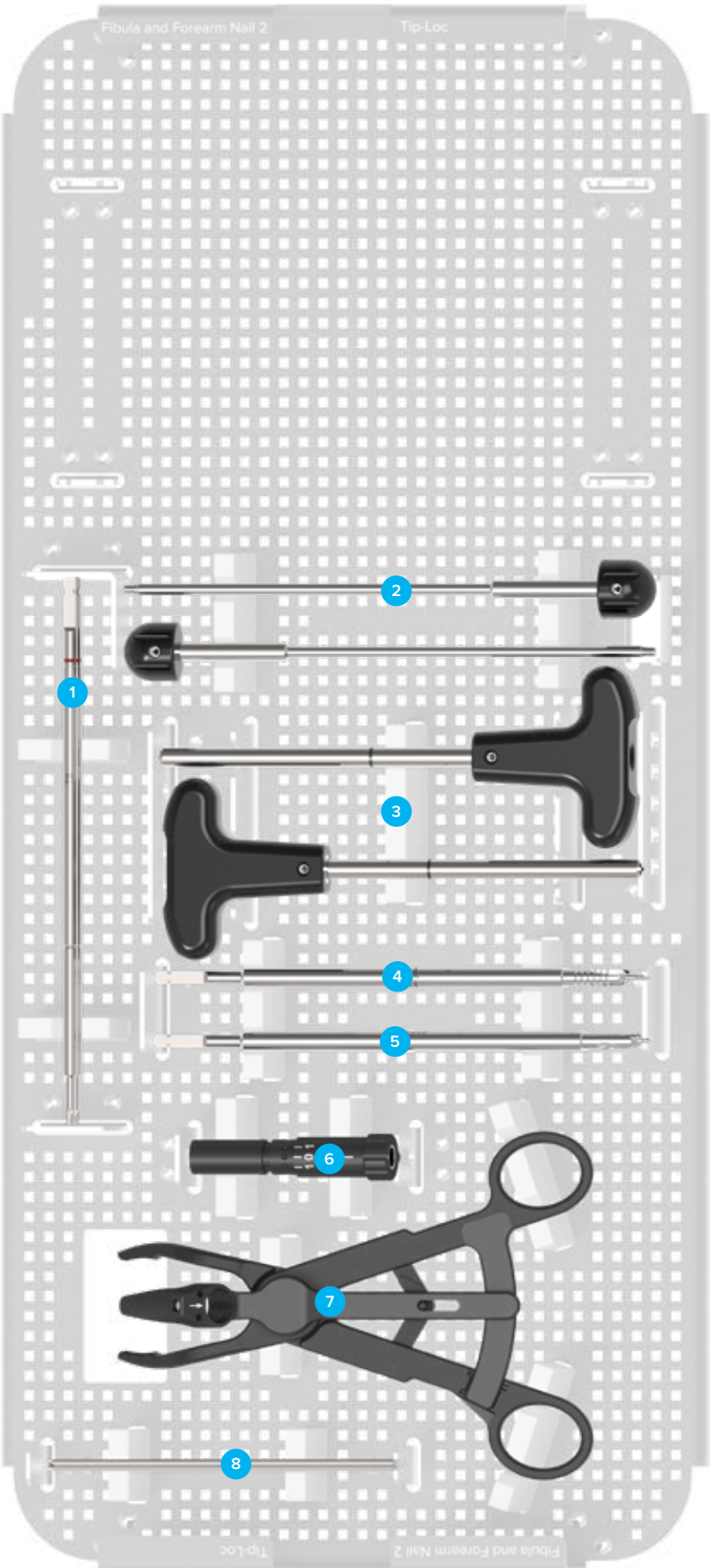
Instrumentation

1	FFN T8 Hexalobe Driver	80-2895
2	Tip-Loc™ Coupler Attachment	80-2484
3	Tip-Loc Bushing Coupler Handle	80-2483
4	FFN Far Cortex Drill	80-3697
5	FFN Near Cortex Drill	80-3696
6	Tip-Loc Clamp Rotary Cannula	80-3760
7	Tip-Loc Clamp	80-3891
8	2.0 mm Short Guide Wire	35-0023

Sterile Tray Components

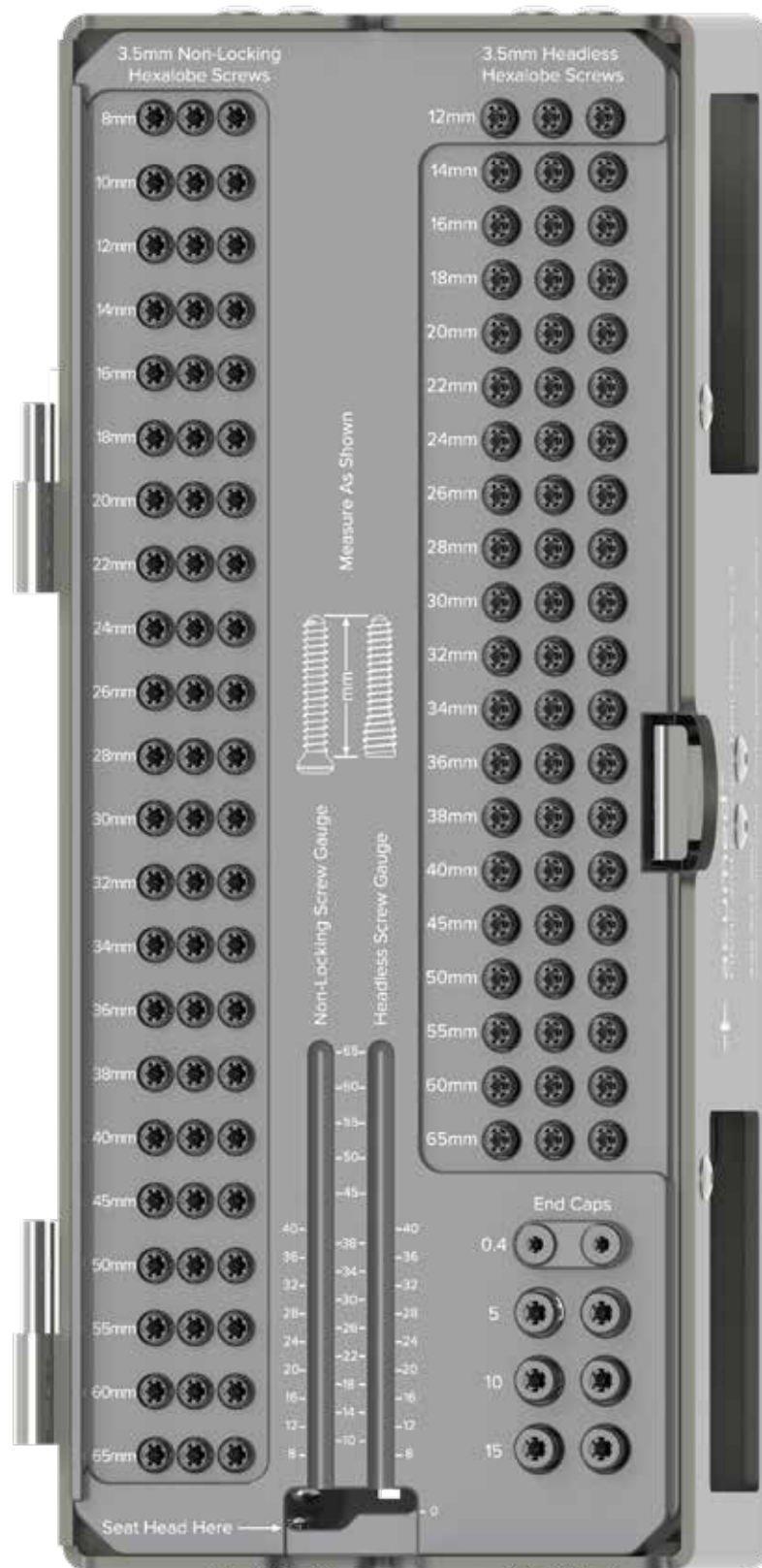
Instrumentation

FFN Far Cortex Drill	80-3697-S
FFN Near Cortex Drill	80-3696-S
2.0 mm Short Guide Wire	35-0023-S



Ordering Information [continued]

Tray Components		
3.5 mm Nonlocking Hexalobe Screws		3.5 mm Headless Hexalobe Screws
3.5 mm x 8 mm Nonlocking Hexalobe Screw	30-0255	3.5 mm x 12 mm Headless Hexalobe Screw
3.5 mm x 10 mm Nonlocking Hexalobe Screw	30-0256	3.5 mm x 14 mm Headless Hexalobe Screw
3.5 mm x 12 mm Nonlocking Hexalobe Screw	30-0257	3.5 mm x 16 mm Headless Hexalobe Screw
3.5 mm x 14 mm Nonlocking Hexalobe Screw	30-0258	3.5 mm x 18 mm Headless Hexalobe Screw
3.5 mm x 16 mm Nonlocking Hexalobe Screw	30-0259	3.5 mm x 20 mm Headless Hexalobe Screw
3.5 mm x 18 mm Nonlocking Hexalobe Screw	30-0260	3.5 mm x 22 mm Headless Hexalobe Screw
3.5 mm x 20 mm Nonlocking Hexalobe Screw	30-0261	3.5 mm x 24 mm Headless Hexalobe Screw
3.5 mm x 22 mm Nonlocking Hexalobe Screw	30-0262	3.5 mm x 26 mm Headless Hexalobe Screw
3.5 mm x 24 mm Nonlocking Hexalobe Screw	30-0263	3.5 mm x 28 mm Headless Hexalobe Screw
3.5 mm x 26 mm Nonlocking Hexalobe Screw	30-0264	3.5 mm x 30 mm Headless Hexalobe Screw
3.5 mm x 28 mm Nonlocking Hexalobe Screw	30-0265	3.5 mm x 32 mm Headless Hexalobe Screw
3.5 mm x 30 mm Nonlocking Hexalobe Screw	30-0266	3.5 mm x 34 mm Headless Hexalobe Screw
3.5 mm x 32 mm Nonlocking Hexalobe Screw	30-0267	3.5 mm x 36 mm Headless Hexalobe Screw
3.5 mm x 34 mm Nonlocking Hexalobe Screw	30-0268	3.5 mm x 38 mm Headless Hexalobe Screw
3.5 mm x 36 mm Nonlocking Hexalobe Screw	30-0269	3.5 mm x 40 mm Headless Hexalobe Screw
3.5 mm x 38 mm Nonlocking Hexalobe Screw	30-0270	3.5 mm x 45 mm Headless Hexalobe Screw
3.5 mm x 40 mm Nonlocking Hexalobe Screw	30-0271	3.5 mm x 50 mm Headless Hexalobe Screw
3.5 mm x 45 mm Nonlocking Hexalobe Screw	30-0272	3.5 mm x 55 mm Headless Hexalobe Screw
3.5 mm x 50 mm Nonlocking Hexalobe Screw	30-0273	3.5 mm x 60 mm Headless Hexalobe Screw
3.5 mm x 55 mm Nonlocking Hexalobe Screw	30-0274	3.5 mm x 65 mm Headless Hexalobe Screw
3.5 mm x 60 mm Nonlocking Hexalobe Screw	30-0275	FFN End Caps
3.5 mm x 65 mm Nonlocking Hexalobe Screw	30-0276	FFN +0.4 mm End Cap
		FFN +5 mm End Cap
		FFN +10 mm End Cap
		FFN +15 mm End Cap



Ordering Information [continued]

Sterile Implants			
3.0 mm Ulna Nails		4.0 mm Ulna Nails	
3.0 mm x 120 mm Straight Ulna Nail 2	4011-3012N-S	4.0 mm x 120 mm Straight Ulna Nail 2	4011-4012N-S
3.0 mm x 170 mm Ulna Nail 2	4011-3017N-S	4.0 mm x 170 mm Ulna Nail 2	4011-4017N-S
3.0 mm x 190 mm Ulna Nail 2	4011-3019N-S	4.0 mm x 190 mm Ulna Nail 2	4011-4019N-S
3.0 mm x 210 mm Ulna Nail 2	4011-3021N-S	4.0 mm x 210 mm Ulna Nail 2	4011-4021N-S
3.0 mm x 230 mm Ulna Nail 2	4011-3023N-S	4.0 mm x 230 mm Ulna Nail 2	4011-4023N-S
3.0 mm x 250 mm Ulna Nail 2	4011-3025N-S	4.0 mm x 250 mm Ulna Nail 2	4011-4025N-S
3.0 mm x 270 mm Ulna Nail 2	4011-3027N-S	4.0 mm x 270 mm Ulna Nail 2	4011-4027N-S
3.6 mm Ulna Nails		Tip-Loc™ Bushing & Set Screw	
3.6 mm x 120 mm Straight Ulna Nail 2	4011-3612N-S	Tip-Loc Bushing & Set Screw Kit, 6 mm	47-0006-S
3.6 mm x 170 mm Ulna Nail 2	4011-3617N-S	Tip-Loc Bushing & Set Screw Kit, 7 mm	47-0007-S
3.6 mm x 190 mm Ulna Nail 2	4011-3619N-S	Tip-Loc Bushing & Set Screw Kit, 8 mm	47-0008-S
3.6 mm x 210 mm Ulna Nail 2	4011-3621N-S	Tip-Loc Bushing & Set Screw Kit, 9 mm	47-0009-S
3.6 mm x 230 mm Ulna Nail 2	4011-3623N-S	Tip-Loc Bushing & Set Screw Kit, 10 mm	47-0010-S
3.6 mm x 250 mm Ulna Nail 2	4011-3625N-S	Tip-Loc Bushing & Set Screw Kit, 11 mm	47-0011-S
3.6 mm x 270 mm Ulna Nail 2	4011-3627N-S	Tip-Loc Bushing & Set Screw Kit, 12 mm	47-0012-S
		Tip-Loc Bushing & Set Screw Kit, 13 mm	47-0013-S
		Tip-Loc Bushing & Set Screw Kit, 14 mm	47-0014-S
		Tip-Loc Bushing & Set Screw Kit, 15 mm	47-0015-S
		Tip-Loc Bushing & Set Screw Kit, 16 mm	47-0016-S
Trays & Caddies			
FFN 2 Base Set Case Base	80-2521	FFN 2 Base Set with Tip-Loc Case Base	80-3948
FFN 2 Base Set Case Lid	80-2522	FFN 2 Base Set Caddy Base	80-2523
FFN 2 Base Set Tray 2	80-2524	FFN 2 Base Set Caddy Lid	80-3480
FFN 2 Base Set Tray 3	80-2719	FFN 2 Base Set with Tip-Loc Case Lid	80-3949
FFN 2 Base Set Tray 1	80-3945	FFN 2 Base Set SS Tray 1 Assembly	80-4062
FFN 2 Base Set Tip-Loc Case Base	80-3946	FFN 2 Base Set SS Tray 2 Assembly	80-4064
FFN 2 Base Set Tip-Loc Case Lid	80-3947	SS Tray Lid	80-4068

Ordering Information [continued]

Sterile Tray Components	
3.5 mm Nonlocking Hexalobe Screws	
3.5 mm x 8 mm Nonlocking Hexalobe Screw	30-0255-S
3.5 mm x 10 mm Nonlocking Hexalobe Screw	30-0256-S
3.5 mm x 12 mm Nonlocking Hexalobe Screw	30-0257-S
3.5 mm x 14 mm Nonlocking Hexalobe Screw	30-0258-S
3.5 mm x 16 mm Nonlocking Hexalobe Screw	30-0259-S
3.5 mm x 18 mm Nonlocking Hexalobe Screw	30-0260-S
3.5 mm x 20 mm Nonlocking Hexalobe Screw	30-0261-S
3.5 mm x 22 mm Nonlocking Hexalobe Screw	30-0262-S
3.5 mm x 24 mm Nonlocking Hexalobe Screw	30-0263-S
3.5 mm x 26 mm Nonlocking Hexalobe Screw	30-0264-S
3.5 mm x 28 mm Nonlocking Hexalobe Screw	30-0265-S
3.5 mm x 30 mm Nonlocking Hexalobe Screw	30-0266-S
3.5 mm x 32 mm Nonlocking Hexalobe Screw	30-0267-S
3.5 mm x 34 mm Nonlocking Hexalobe Screw	30-0268-S
3.5 mm x 36 mm Nonlocking Hexalobe Screw	30-0269-S
3.5 mm x 38 mm Nonlocking Hexalobe Screw	30-0270-S
3.5 mm x 40 mm Nonlocking Hexalobe Screw	30-0271-S
3.5 mm x 45 mm Nonlocking Hexalobe Screw	30-0272-S
3.5 mm x 50 mm Nonlocking Hexalobe Screw	30-0273-S
3.5 mm x 55 mm Nonlocking Hexalobe Screw	30-0274-S
3.5 mm x 60 mm Nonlocking Hexalobe Screw	30-0275-S
3.5 mm x 65 mm Nonlocking Hexalobe Screw	30-0276-S
3.5 mm Headless Hexalobe Screws	
3.5 mm x 12 mm Headless Hexalobe Screw	3018-47012-S
3.5 mm x 14 mm Headless Hexalobe Screw	3018-47014-S
3.5 mm x 16 mm Headless Hexalobe Screw	3018-47016-S
3.5 mm x 18 mm Headless Hexalobe Screw	3018-47018-S
3.5 mm x 20 mm Headless Hexalobe Screw	3018-47020-S
3.5 mm x 22 mm Headless Hexalobe Screw	3018-47022-S
3.5 mm x 24 mm Headless Hexalobe Screw	3018-47024-S
3.5 mm x 26 mm Headless Hexalobe Screw	3018-47026-S
3.5 mm x 28 mm Headless Hexalobe Screw	3018-47028-S
3.5 mm x 30 mm Headless Hexalobe Screw	3018-47030-S
3.5 mm x 32 mm Headless Hexalobe Screw	3018-47032-S
3.5 mm x 34 mm Headless Hexalobe Screw	3018-47034-S
3.5 mm x 36 mm Headless Hexalobe Screw	3018-47036-S
3.5 mm x 38 mm Headless Hexalobe Screw	3018-47038-S
3.5 mm x 40 mm Headless Hexalobe Screw	3018-47040-S
3.5 mm x 45 mm Headless Hexalobe Screw	3018-47045-S
3.5 mm x 50 mm Headless Hexalobe Screw	3018-47050-S
3.5 mm x 55 mm Headless Hexalobe Screw	3018-47055-S
3.5 mm x 60 mm Headless Hexalobe Screw	3018-47060-S
3.5 mm x 65 mm Headless Hexalobe Screw	3018-47065-S
FFN End Caps	
FFN +0.4 mm End Cap	4014-0600-S
FFN +5 mm End Cap	4014-0705-S
FFN +10 mm End Cap	4014-0710-S
FFN +15 mm End Cap	4014-0715-S

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