



INnate™ Surgical Technique Guide

The intramedullary threaded nail for metacarpals
designed by hand surgeons



EXSOMED™
Innovations in Hand Surgery

INDICATIONS FOR USE

The ExsoMed INnate™ System is intended for fixation of intra-articular and extra-articular fractures and non-unions of small bones and small bone fragments; arthrodesis of small joints; bunionectomies and osteotomies, including scaphoid and other carpal bones, metacarpals, tarsals, metatarsals, patella, ulnar styloid, capitellum, radial head and radial styloid.

The INnate System is provided sterile. The implant is manufactured from stainless steel and is offered in 3.6mm and 4.5mm diameters. The implants are provided with a separate disposable instrument kit specific to the implant diameter.

DESIGN RATIONALE

The INnate™ System introduces an intramedullary threaded nail designed specifically for metacarpal fractures to provide surgeons with a reliable solution through a simple approach. The robust length offering with a differential diameter design is intended to accurately fit the metacarpal canal and to create stable fixation and precise reduction for all types of metacarpal fractures.

Multiple lengths for treatment of various shapes and sizes of small bones

- **3.6mm Diameter:** 35mm, 40mm, 45mm, 50mm, 55mm Lengths
- **4.5mm Diameter:** 35mm, 40mm, 45mm, 50mm, 55mm, 65mm, 75mm Lengths

Non-compression design avoids shortening in oblique or comminuted fractures

Threads designed for circumferential cortical purchase in the medullary canal

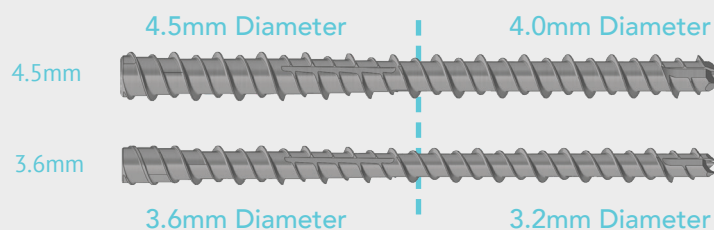
Dual Diameter design to allow passage through the isthmus

Fast lead for surgical efficiency



T10 hexalobe to reduce the risk of stripping implant

Cannulated for accurate placement



Smaller diameter leading end design allows passage through isthmus

Anatomic Reduction

- Non-compression implant design allows for precise, anatomic reduction for all metacarpal fractures types, including oblique and comminuted fractures.

Stable Fixation

- Various lengths appropriately sized for the metacarpal bone allows optimal stability and bone purchase for all fracture locations.

Less Traumatic

- Cannulated technique with an intramedullary implant designed to minimize soft tissue, cartilage, and vascular damage upon insertion.

Early, Active Mobilization

- Large implant diameter with circumferential intramedullary cortical thread engagement is designed to facilitate early, active mobilization post operative protocols for accelerated healing and earlier return to work.

SURGICAL TECHNIQUE

1

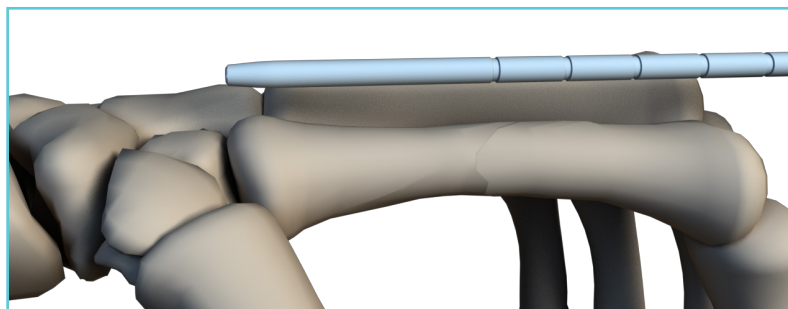
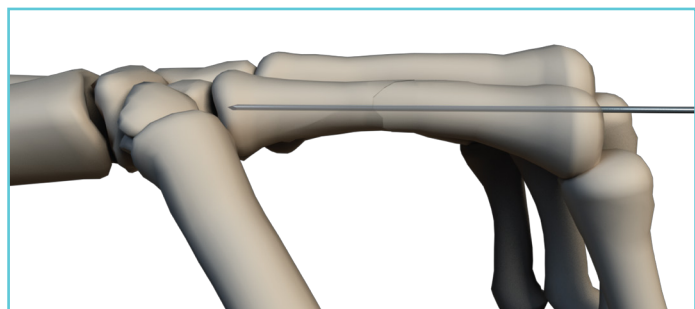
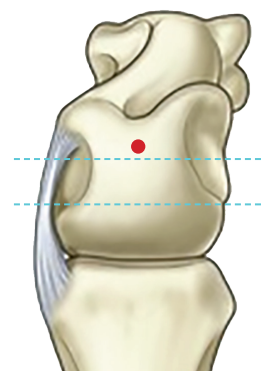
INSERT GUIDE WIRE

Anatomically reduce the fracture fragments.

Insert guide wire percutaneously in a retrograde fashion until the tip of the guide wire is at the proximal cortex.

Note: The guide wire entry point should be in the dorsal third of the metacarpal head.

OR Tip: Once guide wire is in place, make a 2mm stab incision at the point of guide wire insertion. This will facilitate the free movement of the drill.



2

MEASURE AND SELECT IMPLANT LENGTH

For Instrument Kits that contain a depth gauge: Insert the INnate depth gauge via the stab incision and, under fluoroscopy, confirm the tip of the depth gauge is against the metacarpal head. Measure the exposed length of the guide wire against the markings to select the appropriate implant length.

Note: Account for any tissue between the depth gauge and bone as well as for the subflush placement of the implant head when determining implant length. It may be appropriate to subtract up to 5mm from the depth gauge reading.

Alternatively, the edge of the depth gauge may be used to measure the length of metacarpal directly for determining implant length. Hold the depth gauge against the dorsum of the hand with the measurement edge aligned with the guide wire. Under fluoroscopy use the marked notches along the edge of the depth gauge to select the desired implant length.

For Instrument Kits that do not contain a depth gauge: Use the provided INnate sizing guide instrument to determine implant length.

Note: The sizing guide is provided non-sterile and must be sterilized prior to use.

SURGICAL TECHNIQUE

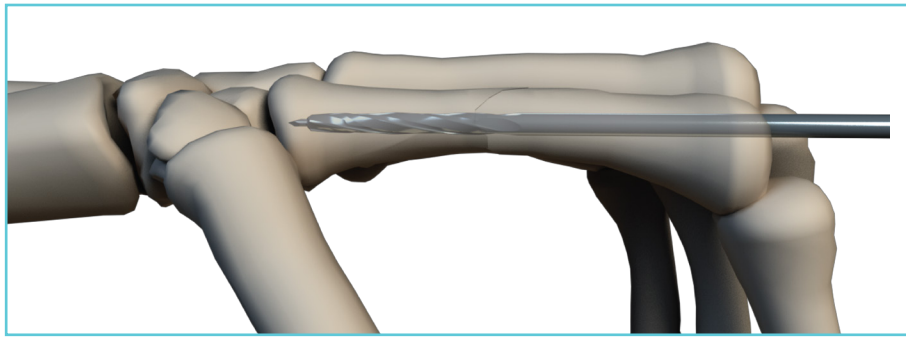
3 DRILL

Drill by passing the cannulated drill over the guide wire to the desired depth. Depth markings on the drill can be used to monitor drill depth.

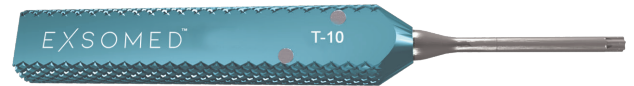
OR Tip: *Pre-drill past the fracture site.*

Remove the drill carefully while maintaining the guide wire position. Do not remove the guide wire.

OR Tip: *Prior to drilling, advance the guide wire into the base of the metacarpal to reduce the chances of dislodging the guide wire when the drill is removed.*



4 INSERT IMPLANT AND CONFIRM PLACEMENT



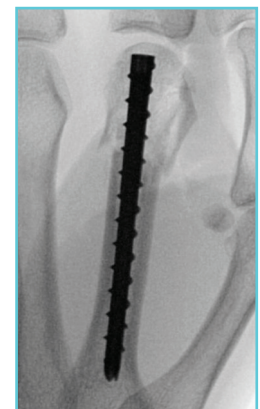
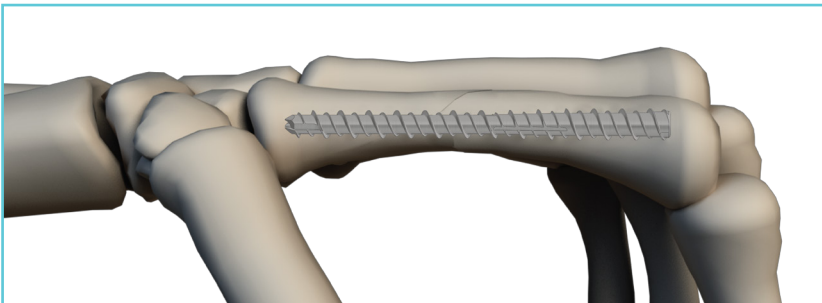
Cannulated T-10 Driver

Insert selected implant over the guide wire.

Advance the implant into the bone to the desired depth. Manually hold reduction as the implant traverses the fracture site and engages the far fragment to prevent gapping at the fracture site.

Verify placement and proper reduction with radiographic imaging. The head of the implant should be buried below the articular surface.

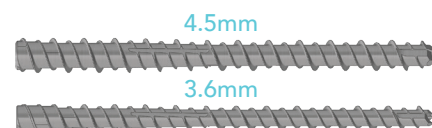
Remove the driver and guide wire.



ORDERING INFORMATION

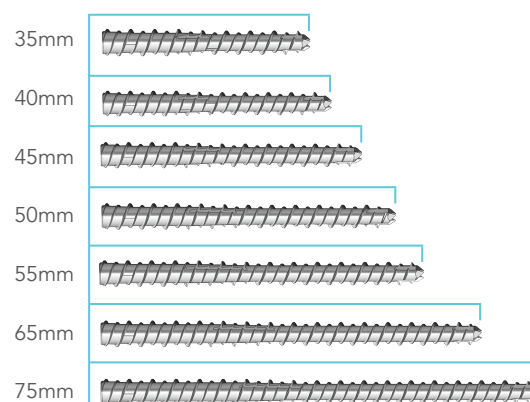
INnate™ Sterile Implants, 3.6mm

EXINN923635	INnate Implant, 3.6 x 35mm
EXINN923640	INnate Implant, 3.6 x 40mm
EXINN923645	INnate Implant, 3.6 x 45mm
EXINN923650	INnate Implant, 3.6 x 50mm
EXINN923655	INnate Implant, 3.6 x 55mm



INnate™ Sterile Implants, 4.5mm

EXINN924535	INnate Implant, 4.5 x 35mm
EXINN924540	INnate Implant, 4.5 x 40mm
EXINN924545	INnate Implant, 4.5 x 45mm
EXINN924550	INnate Implant, 4.5 x 50mm
EXINN924555	INnate Implant, 4.5 x 55mm
EXINN924565	INnate Implant, 4.5 x 65mm
EXINN924575	INnate Implant, 4.5 x 75mm



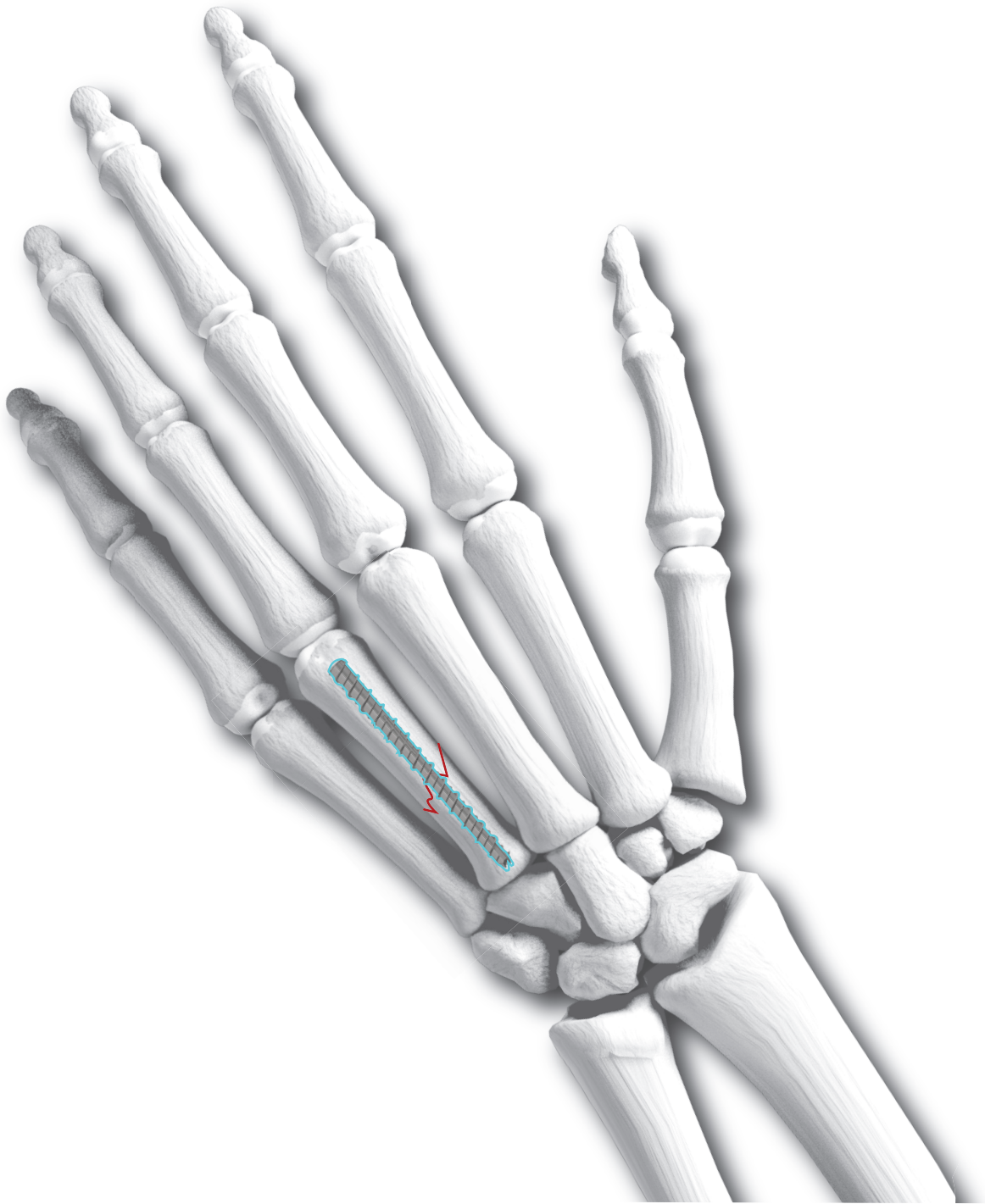
INnate™ Disposable Instrument Kit

EXINN913600	3.6mm INnate Instrument Kit
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- 1 .045 Single Trocar Guide Wire
- 1 .045 Double Trocar Guide Wire
- 1 Depth Gauge
- 1 Cannulated Drill, 2.7mm
- 1 Cannulated Driver, T-10

EXINN914500	4.5mm INnate Instrument Kit
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- 1 .045 Single Trocar Guide Wire
- 1 .045 Double Trocar Guide Wire
- 1 Depth Gauge
- 1 Cannulated Drill, 3.4mm
- 1 Cannulated Driver, T-10



EXSOMED™

Innovations in Hand Surgery

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