

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.



NanoPhix™ Cannulated Lag Screw System

The NanoPhix Lag Screw is intended to address small fracture fragments such as avulsion, mallet, condylar, spiral, oblique, Rolando, or Bennett fractures.

Its 1.5 mm diameter and novel delivery technique facilitate this solution for these types of fractures.

	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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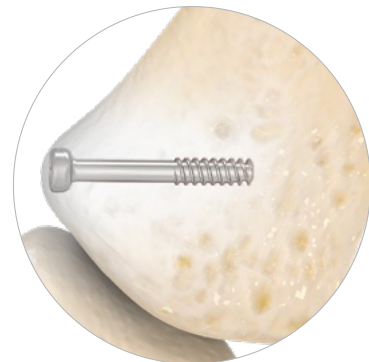
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System Features

NanoPhix Cannulated Lag Screw System

The 1.5 mm Lag Screw has a unique delivery technique that eliminates the need for a wire collet + cannulated drill.

The system consists of 21 implants from 6–26 mm in 1 mm increments, 2 dual-diameter guide wires, a depth gauge, and a 1/16" hex driver. Implants and instruments come sterile packed.



Cannulated, 1.5 mm diameter design **allows simple and precise fixation of small fracture fragments** such as avulsion and condylar fractures



Specifically sized for small fracture fragments to facilitate early, active **mobilization for accelerated healing and faster return to daily activities**



Innovative dual-diameter guide wire eliminates the need for drilling, simplifying a more precise implant placement

NanoPhix Cannulated Lag Screw System Surgical Technique

1 Reduce Fracture and Insert Guide Wire



Figure 1

1. Reduce the fracture fragment under fluoroscopy with a closed reduction technique
2. Insert the dual-diameter guide wire percutaneously through the fracture fragment
3. Fully advance the guide wire until the trocar tip passes the far side cortical wall and then retract until the trocar tip reaches the desired final implant position

Note: When advancing or retracting the guide wire, always clamp on only the larger-diameter end (figure 2). Clamping on the smaller-diameter end may apply excessive torsional stresses to the guide wire.

Tip: Depending on the fracture pattern and clinical assessment, open techniques may be utilized to optimally reduce the fracture. Avoid articular surfaces whenever possible.

Figure 2



2 Measure and Select Implant Length and Size

Figure 3



1. Verify under fluoroscopy that the guide wire tip is positioned at the desired final implant tip location
2. Create a small stab incision adjacent to the guide wire entry site until the scalpel blade contacts the bone
3. Insert the depth gauge / countersink over the guide wire until the depth gauge tip contacts the bone (confirm under fluoroscopy)
4. If optional countersinking is desired, rotate the depth gauge in a clockwise and counterclockwise motion to countersink into the bone
5. Use the laser mark on the guide wire (illustrated in figure 5 as 16 mm) to select the desired implant length

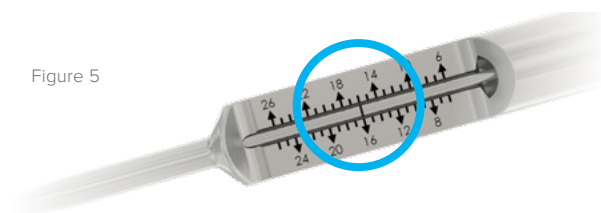
Figure 4



Tip: A #15 scalpel is recommended for incision. It may be appropriate to downsize the implant length by 2 mm or more from the depth gauge reading to account for any tissue between the depth gauge and bone, as well as for subosseous placement of the implant.

NanoPhix implants and surgical sets are packaged separately. NanoPhix surgical sets are compatible with all sizes of NanoPhix implants offered.

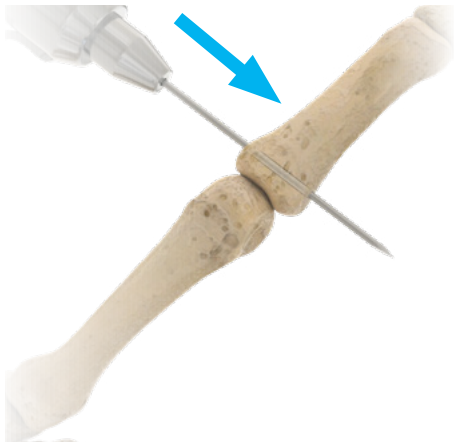
Figure 5



NanoPhix Cannulated Lag Screw System Surgical Technique [continued]

3 Insert Implant and Confirm Placement

Figure 6



1. After measurement, clamp the larger-diameter end of the guide wire to advance it through bone until enough guide wire is exiting the far-side cortex to clamp
2. Reposition the wire driver to the far-side cortex and clamp the larger-diameter end of the guide wire to draw the guide wire so that the smaller diameter spans the fracture site

Note: Be careful not to pull the guide wire completely out during this maneuver.

3. Slide the selected implant over the smaller-diameter end of the guide wire
4. Slide the driver down the guide wire until the driver tip engages the trailing end of the implant
5. Using the driver, advance the implant along the smaller-diameter end of the guide wire until the fracture site is reached
6. Ensure proper reduction is maintained as the implant engages the distal fragment to prevent distraction at the fracture site

Note: Be careful not to pull the guide wire completely out during this maneuver.

7. Once the desired implant placement and reduction is achieved, verify under fluoroscopy
8. Clamp the larger-diameter end of the guide wire on the exiting end for removal

Figure 7

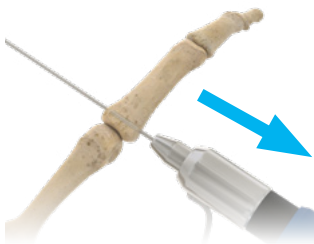


Figure 8

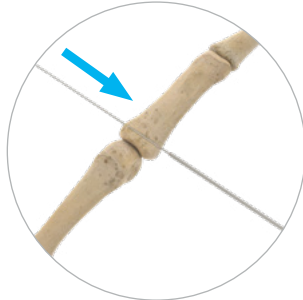


Figure 9

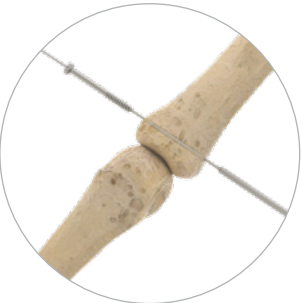
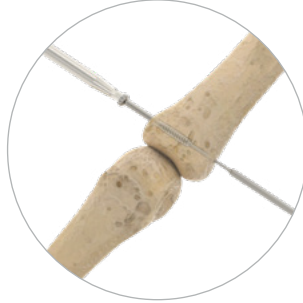
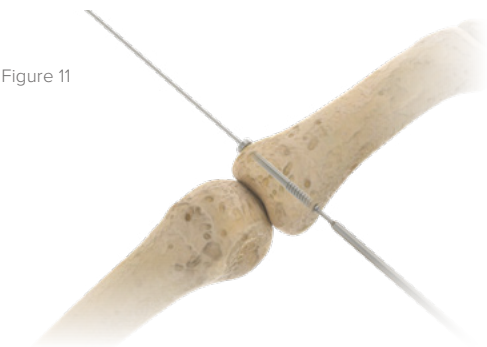


Figure 10



Check product-specific instructions for use. For complete product information, including indications, contraindications, warnings, precautions, and potential adverse effects, see the package insert and acumed.net.

Figure 11



Ordering Information

Multiple lengths for treatment of various fracture patterns: available in 1.5 mm diameter in lengths of 6–26 mm (1.0 mm increments)

Tray Components

Distal Humerus Plates

NanoPhix Lag Screw 1.5 mm x 6 mm	EXINN921506
NanoPhix Lag Screw 1.5 mm x 7 mm	EXINN921507
NanoPhix Lag Screw 1.5 mm x 8 mm	EXINN921508
NanoPhix Lag Screw 1.5 mm x 9 mm	EXINN921509
NanoPhix Lag Screw 1.5 mm x 10 mm	EXINN921510
NanoPhix Lag Screw 1.5 mm x 11 mm	EXINN921511
NanoPhix Lag Screw 1.5 mm x 12 mm	EXINN921512
NanoPhix Lag Screw 1.5 mm x 13 mm	EXINN921513
NanoPhix Lag Screw 1.5 mm x 14 mm	EXINN921514
NanoPhix Lag Screw 1.5 mm x 15 mm	EXINN921515
NanoPhix Lag Screw 1.5 mm x 16 mm	EXINN921516
NanoPhix Lag Screw 1.5 mm x 17 mm	EXINN921517
NanoPhix Lag Screw 1.5 mm x 18 mm	EXINN921518
NanoPhix Lag Screw 1.5 mm x 19 mm	EXINN921519
NanoPhix Lag Screw 1.5 mm x 20 mm	EXINN921520
NanoPhix Lag Screw 1.5 mm x 21 mm	EXINN921521
NanoPhix Lag Screw 1.5 mm x 22 mm	EXINN921522
NanoPhix Lag Screw 1.5 mm x 23 mm	EXINN921523
NanoPhix Lag Screw 1.5 mm x 24 mm	EXINN921524
NanoPhix Lag Screw 1.5 mm x 25 mm	EXINN921525
NanoPhix Lag Screw 1.5 mm x 26 mm	EXINN921526



NanoPhix 1.5 mm Disposable Instrument Kit

NanoPhix 1.5 mm Instrument Kit

EXINN911500

Includes:

2 Dual-Diameter Guide Wires, Single Trocar

1 Depth Gauge / Countersink Device

1 Cannulated Hex Driver



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