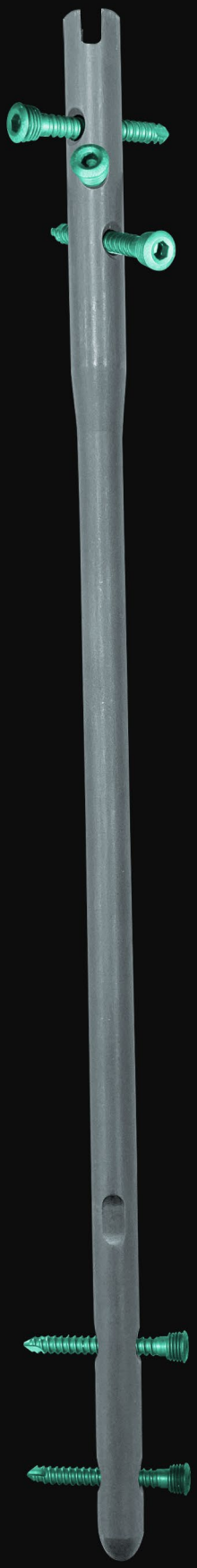
SURGICAL TECHNIQUE

Intralock H Humeral Intramedullary Nail



TRAUFIX
READY TO RUN

TABLE OF CONTENTS

INTRODUCTION

This technique is suggested to describe the use of the instrument and implant, not aiming to interfere with the experience and decisions of the traumatologist considering his/her vast clinical and surgical experience to determine the best proposal for each particular patient.

IMPLANTS FEATURES

- Available in 7mm and 8mm diameter
- Made of Ti6Al4V ELI titanium alloy
- 3 proximal locking holes
- 2 distal locking holes
- 3.5 mm diameter from 20mm to 50mm in length Locking screw

SURGICAL INDICATIONS

Traufix intramedullary nails are indicated for diaphysiary fractures of the humerus.

SPECIFICATIONS

Intralock H Humeral Intramedullary Nail made of high quality titanium.

Intralock H Humeral Intramedullary Nail 7 mm

CODE	
197.160	7 mm X 160 mm
197.180*	7 mm X 180 mm
197.200*	7 mm X 200 mm
197.220*	7 mm X 220 mm
197.240*	7 mm X 240 mm
197.260*	7 mm X 260 mm
197.280*	7 mm X 280 mm
197.300*	7 mm X 300 mm
197.320*	7 mm X 320 mm

* Contained in the standard implant set.

Intralock H Humeral Intramedullary Nail 8 mm

CODE	
194.160	8 mm X 160 mm
194.180*	8 mm X 180 mm
194.200*	8 mm X 200 mm
194.220*	8 mm X 220 mm
194.240*	8 mm X 240 mm
194.260*	8 mm X 260 mm
194.280*	8 mm X 280 mm
194.300*	8 mm X 300 mm
194.320*	8 mm X 320 mm

* Contained in the standard implant set.

Intralock H Humeral Intramedullary Nail 9 mm

CODE	
218.160	9 mm X 160 mm
218.180	9 mm X 180 mm
218.200	9 mm X 200 mm
218.220	9 mm X 220 mm
218.240	9 mm X 240 mm
218.260	9 mm X 260 mm
218.280	9 mm X 280 mm
218.300	9 mm X 300 mm
218.320	9 mm X 320 mm

Intralock H Humeral Intramedullary Nail 10 mm

CODE	
219.160	10 mm X 160 mm
219.180	10 mm X 180 mm
219.200	10 mm X 200 mm
219.220	10 mm X 220 mm
219.240	10 mm X 240 mm
219.260	10 mm X 260 mm
219.280	10 mm X 280 mm
219.300	10 mm X 300 mm
219.320	10 mm X 320 mm

3.5mm Locking Screw for Intralock Intramedullary Nail

CODE	
195.20	3.5 mm X 20 mm
195.25	3.5 mm X 25 mm
195.30	3.5 mm X 30 mm
195.35	3.5 mm X 35 mm
195.40	3.5 mm X 40 mm
195.45	3.5 mm X 45 mm
195.50	3.5 mm X 50 mm
195.55	3.5 mm X 55 mm
195.60	3.5 mm X 60 mm
195.65	3.5 mm X 65 mm
195.70	3.5 mm X 70 mm
195.75	3.5 mm X 75 mm
195.80	3.5 mm X 80 mm

End Cap for humeral Intramedullary Nail

CODE

196.08

DESCRIPTION OF THE SURGICAL TECHNIQUE

Patient Positioning

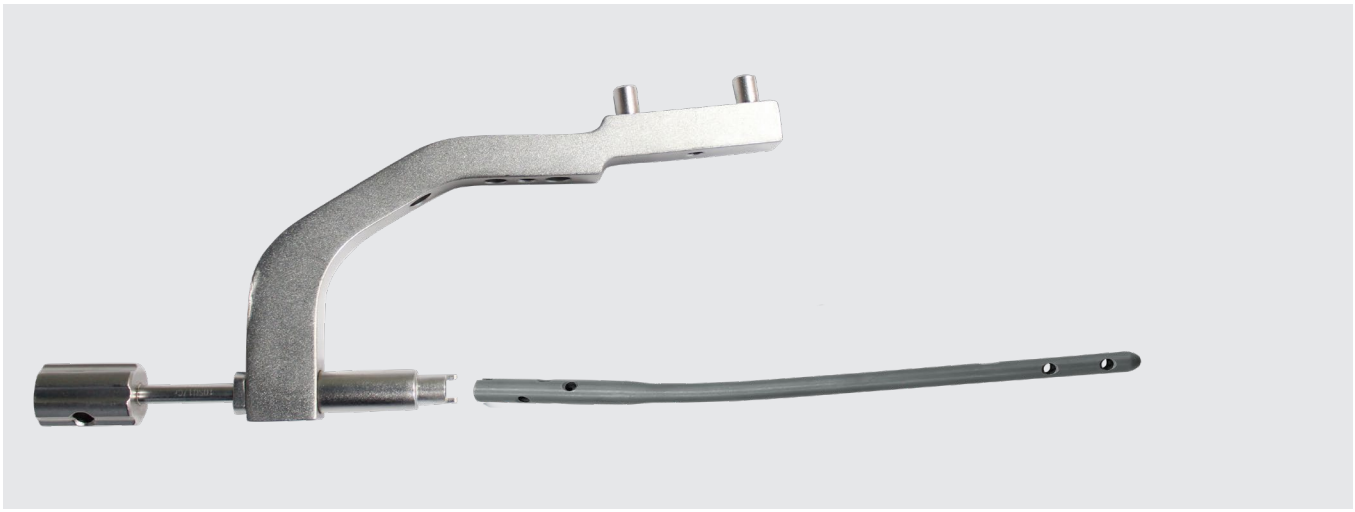
Place the patient in the beach chair position.

Approach:

The head of the humerus is exposed through an anterolateral incision. The entrance is up to 1 cm from the clavicular acromium dissecting up to the rotator cuff. Caution is necessary in order to minimize injuries and repair tendon.

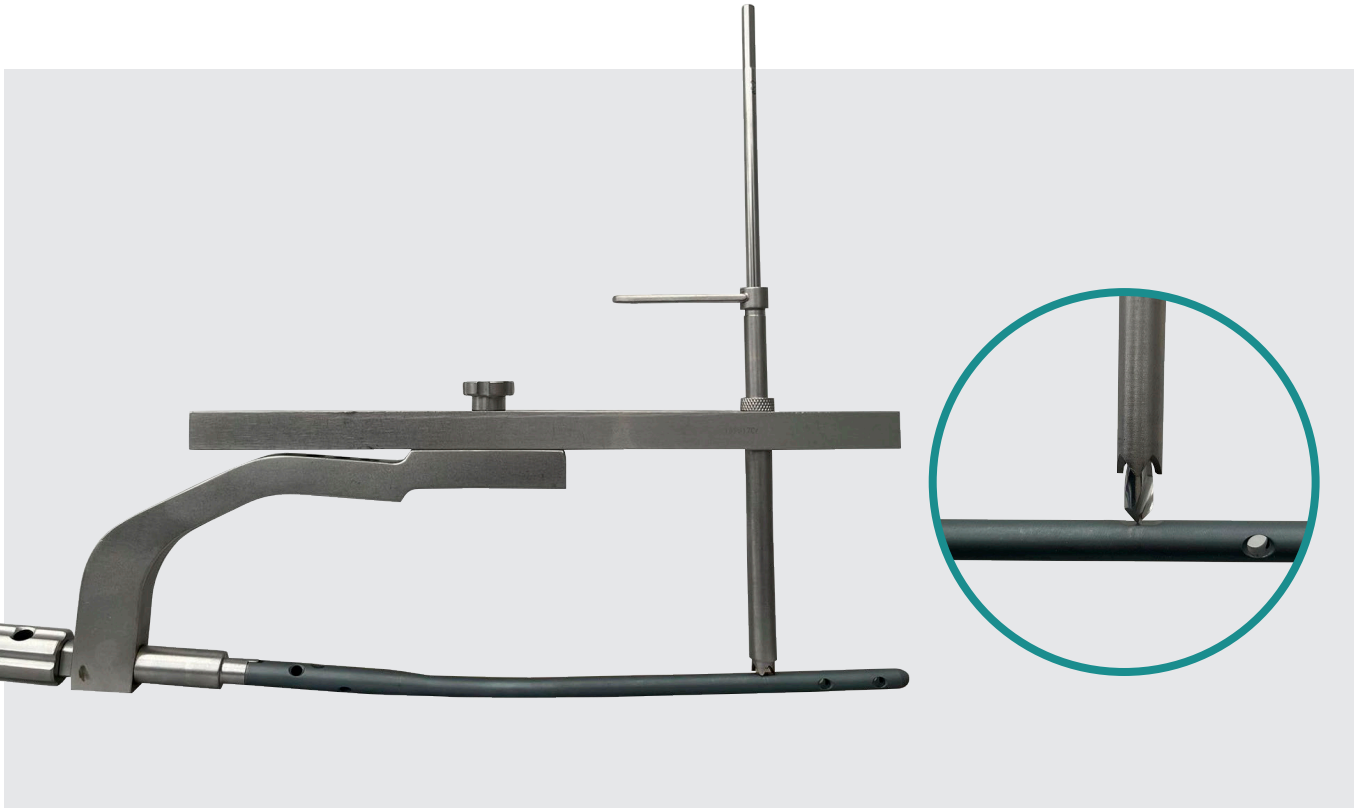
Preparation of the equipment

1. The nail is placed on the U-ruler and adjusted with the nail fastener.

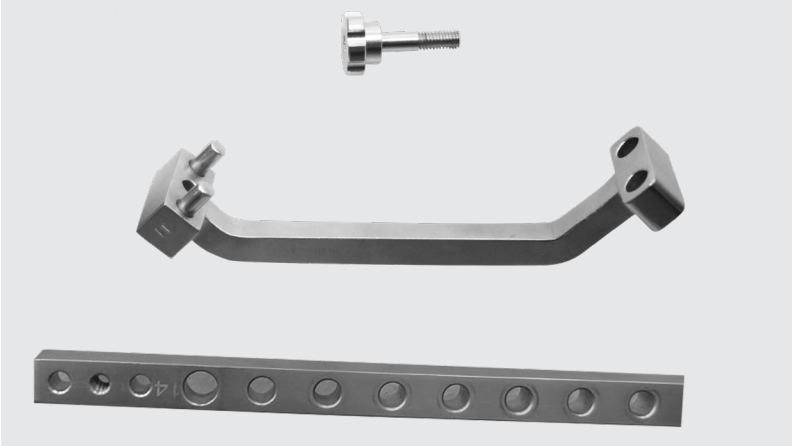


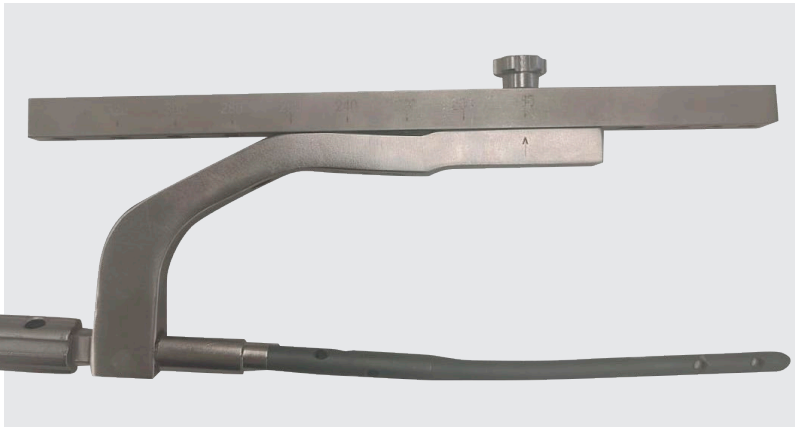
2. The graduated strip is placed over the U-ruler and fastened with one of the screws and taking care of the arrow corresponding to the length of the nail matches the arrow of the U-ruler.

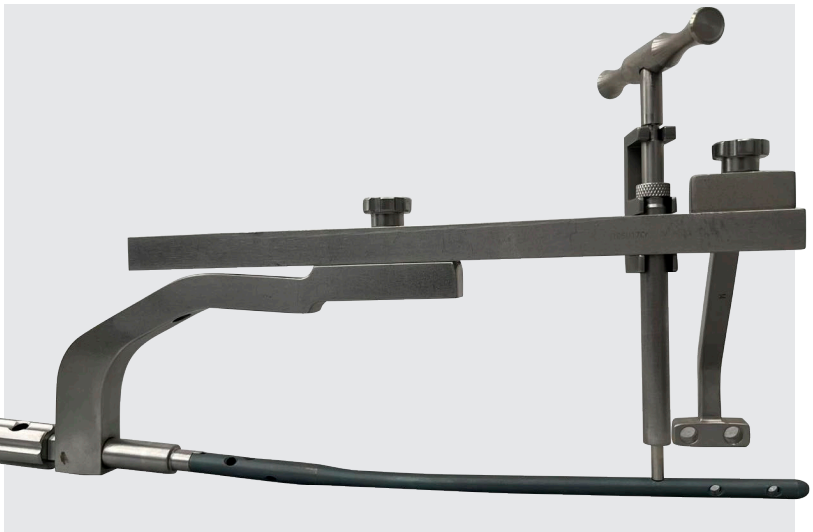
3. The inner and outer sleeve for the 5.2mm drill bit is placed on the graduated rail, then the drill bit, which must coincide with the distal locking plane.



4. The distal locking arm is assembled with the graduated distal locking bar and secured with the screw and Ø 5.0 allen wrench. The 5.2 mm sleeve is then placed on the clamp with the T-handle probe and the 5.2 mm drill bit.







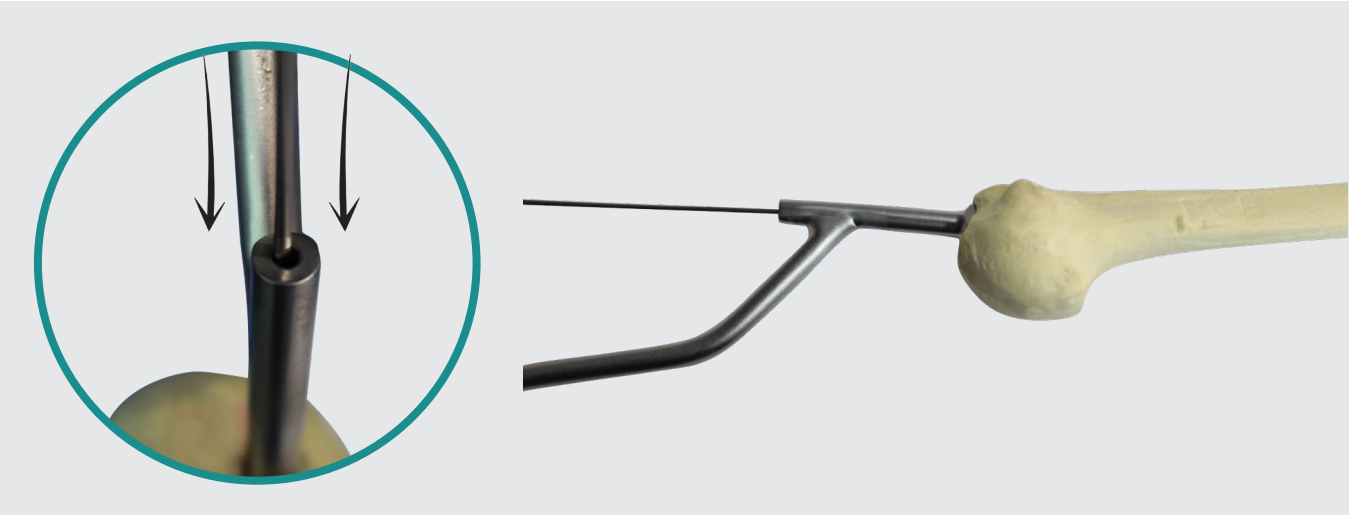
Implant Placement:

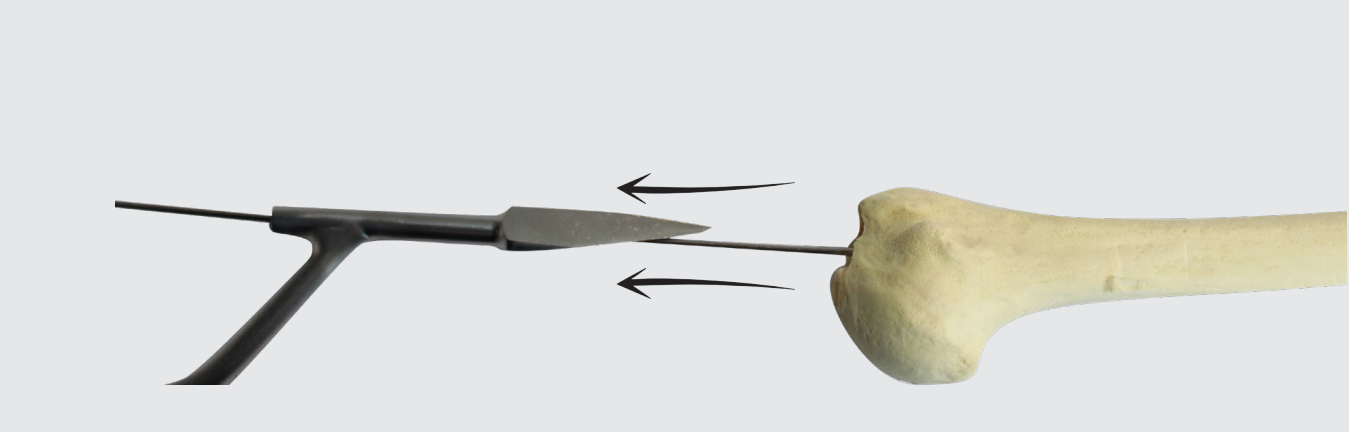
1. Perform fracture reduction, if applicable.

2. The start of the perforation is made with the initiating punch.

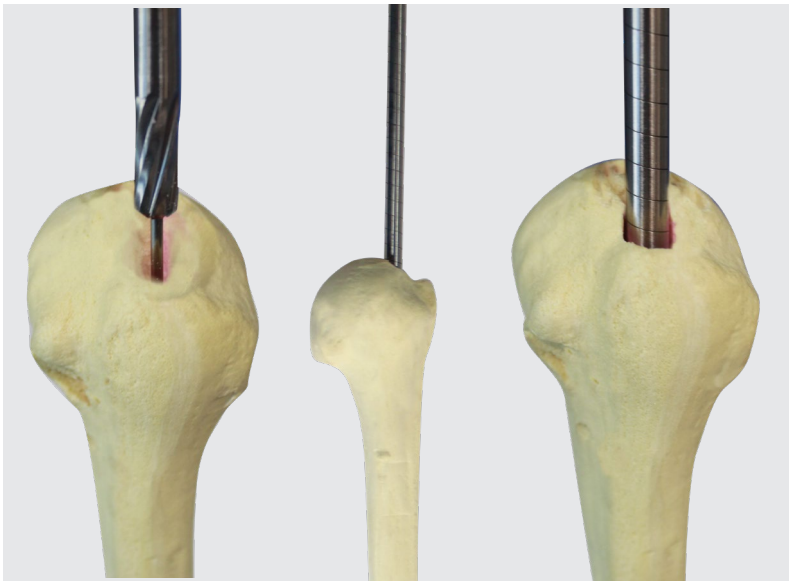
3. Drilling is performed with the starter punch and a threaded guide is placed.

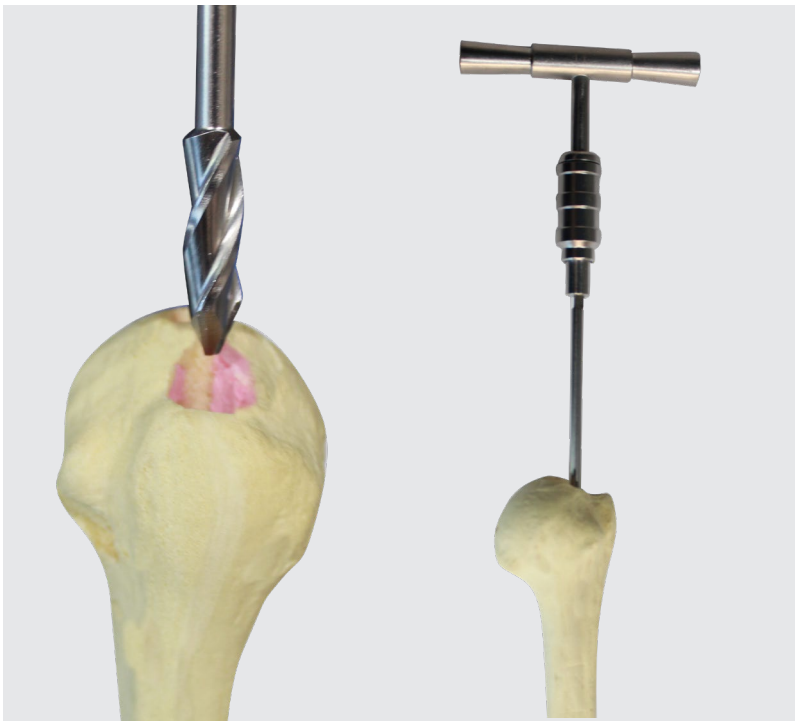
4. Remove the guide





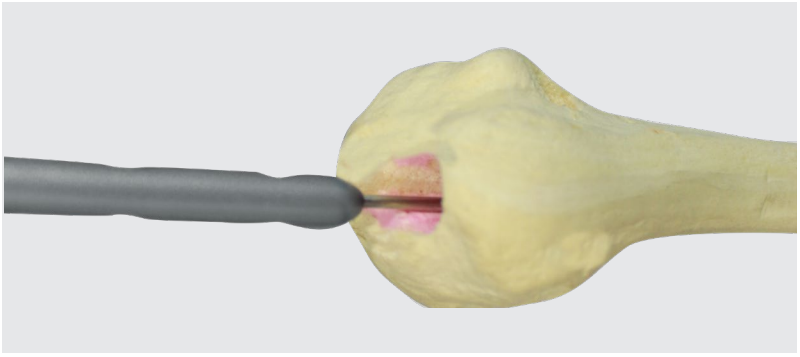
5. The medullary channel is prepared using the rigid reamers and the T-handle. Ream to the size of the nail diameter starting with the smallest diameter reamer.

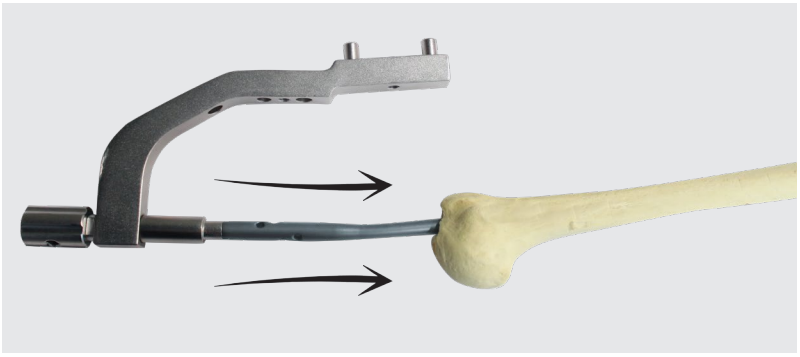




6. Nail guide is introduced.

7. The nail is inserted through the guide with rotating motion. Once it reaches the focus of the fracture, assure that the fracture is kept reduced or reduce it, if it has not been previously done.



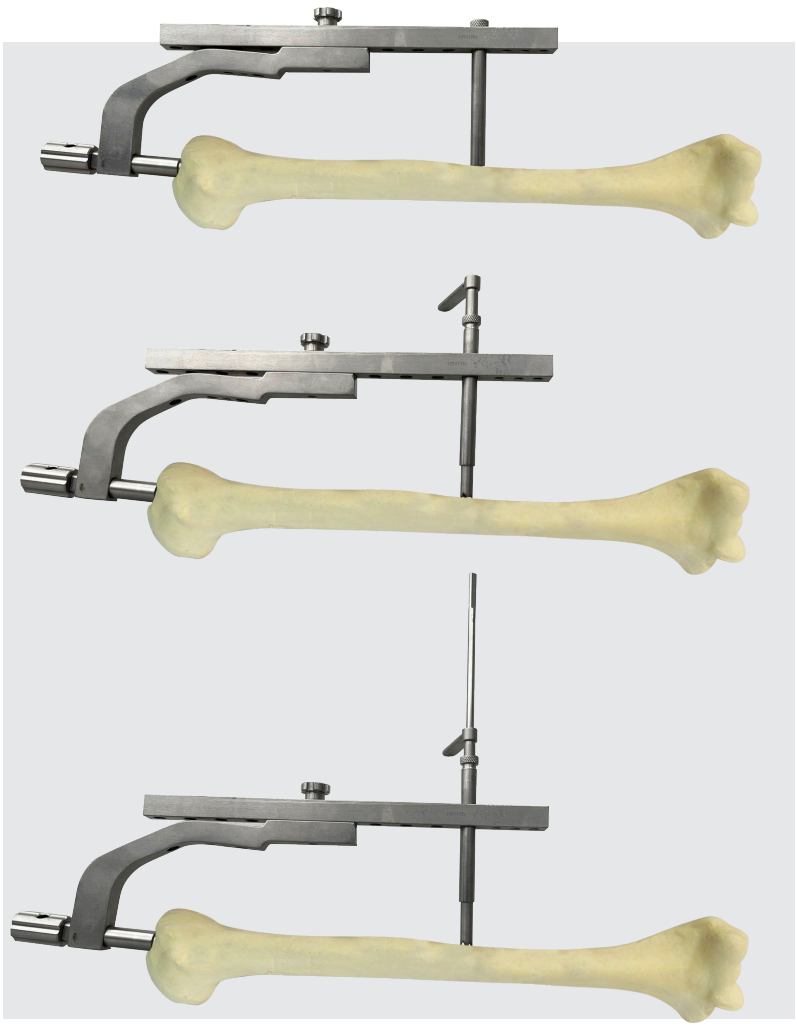


8. Once the focus of the fracture has been crossed, the impactor can be used, if necessary, to finish inserting the nail.The nail should be approximately 1 cm inside the surface of the bone.

9. Remove guide.

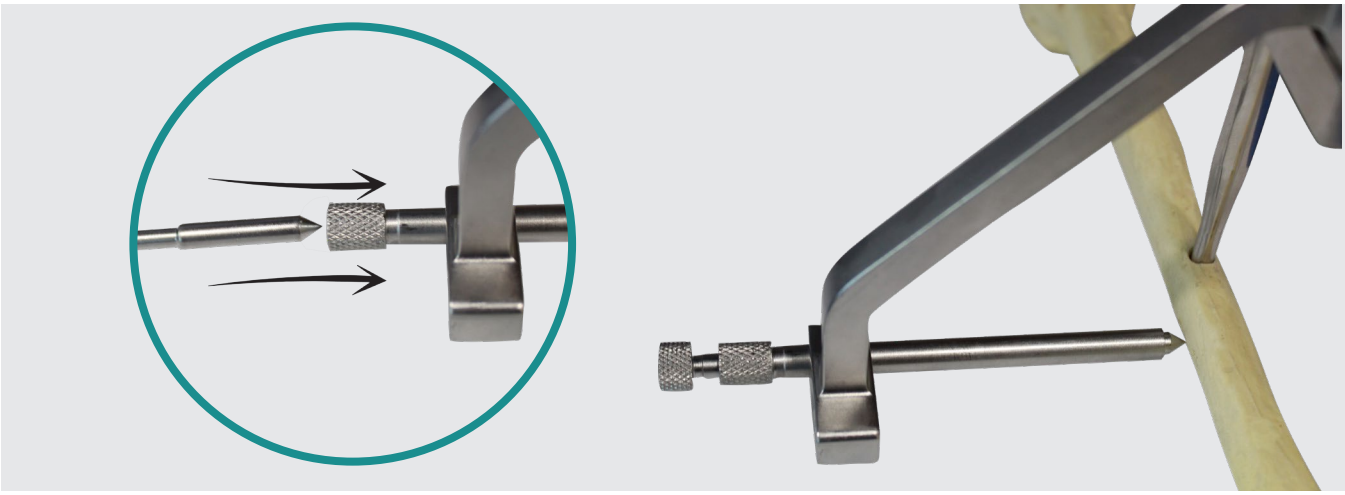
10. The graduated strip is placed again on top of the U-ruler as previously performed by tightening the screw with the allen wrench.

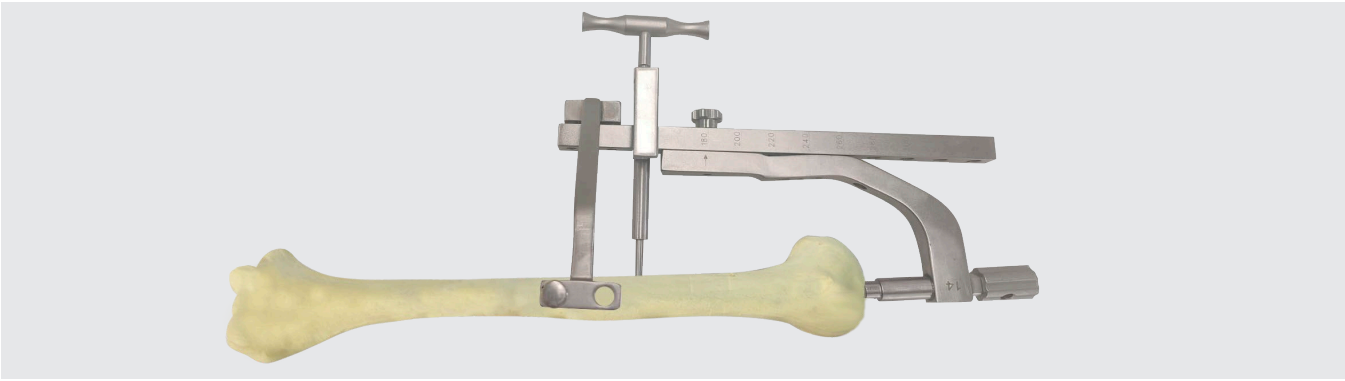
11. Subsequently, the internal and external sleeves for 5.2 mm bit previously used to verify the calibration of the nail. Proceed to perforate the first cortical with the 5.2 mm bit.



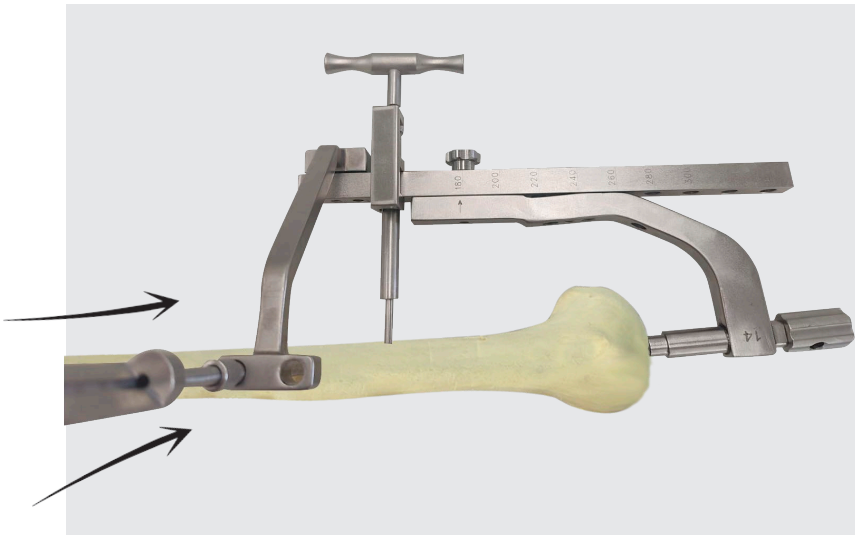
12.Leave the graduated strip and place the distal locking device (arm) previously assembled and then the probe.
Note: The blockage is performed from posterior to anterior.

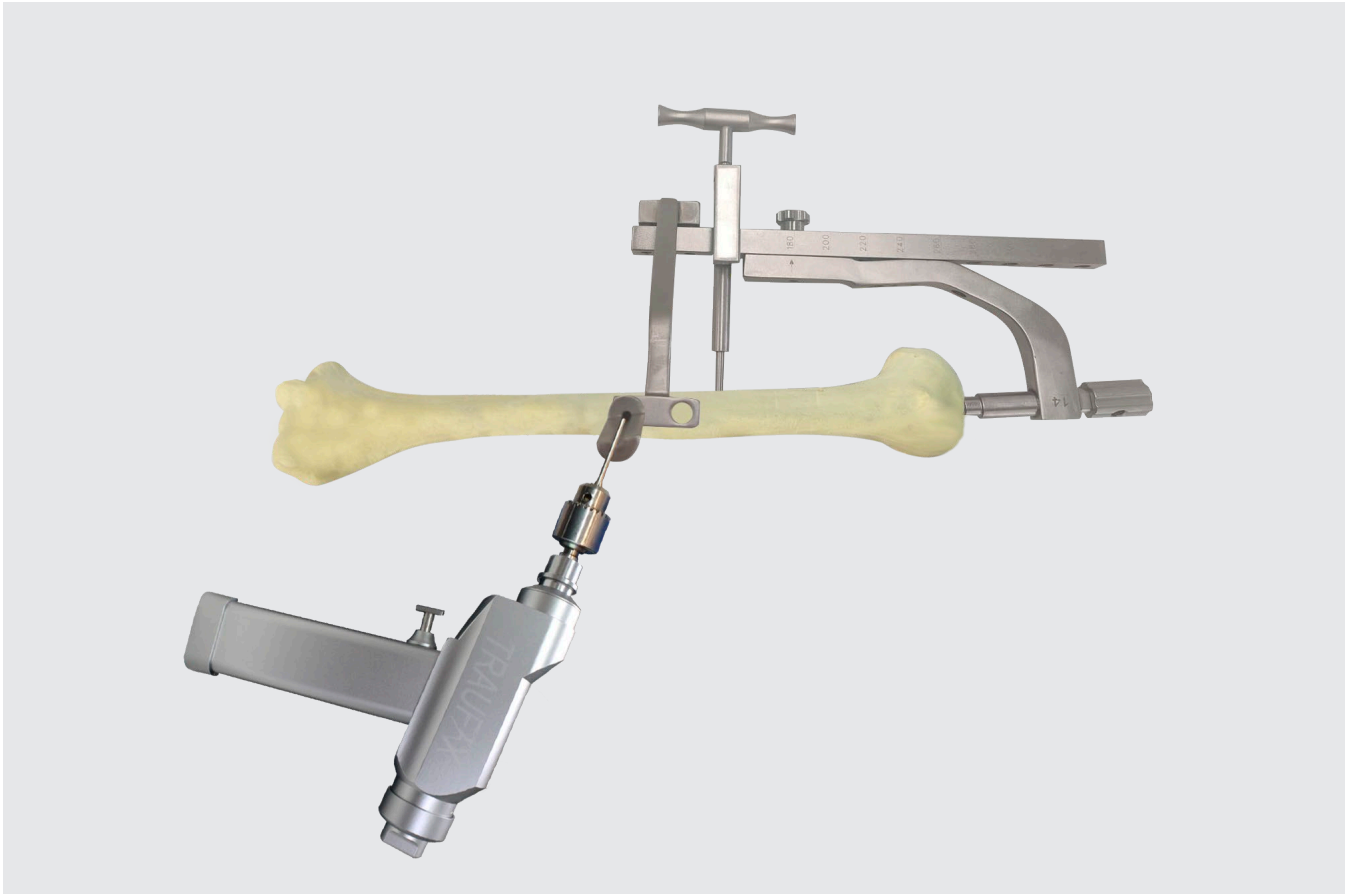
13. With the device locked in place, the tissue dilator punch sleeve is used to start perforating the skin.





14. Both cortices are drilled in the most distal hole with the 2.9 mm drill bit.



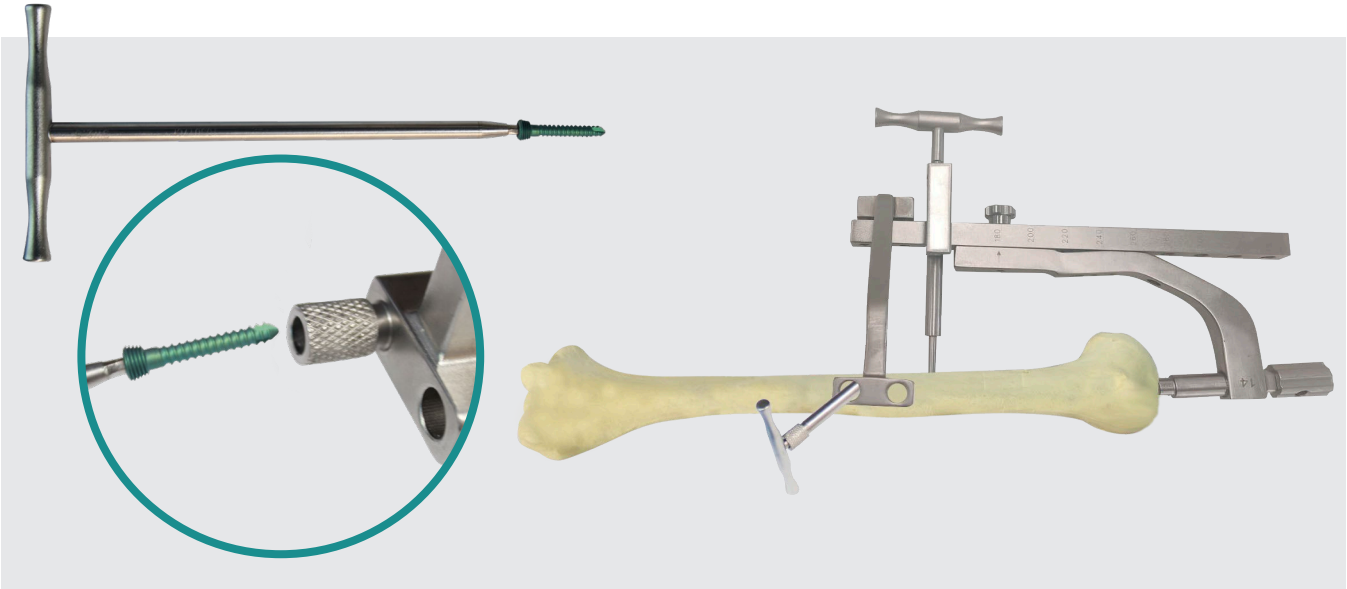


15. The inner sleeve is removed and the depth is measured with the depth meter to determine the length of the locking screw to be used.

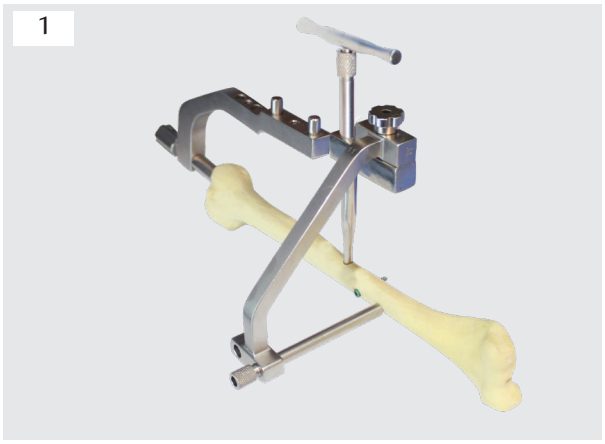
16. Pass the tap through the hole made.

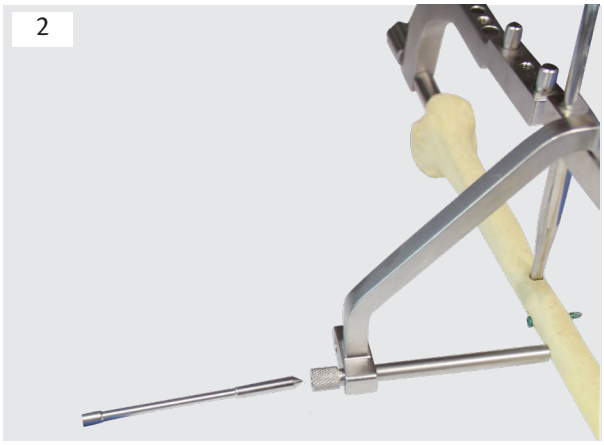
17. With the help of the T-handled bit, expand the perforation at the beginning of the bone to make room for the locking screw head.

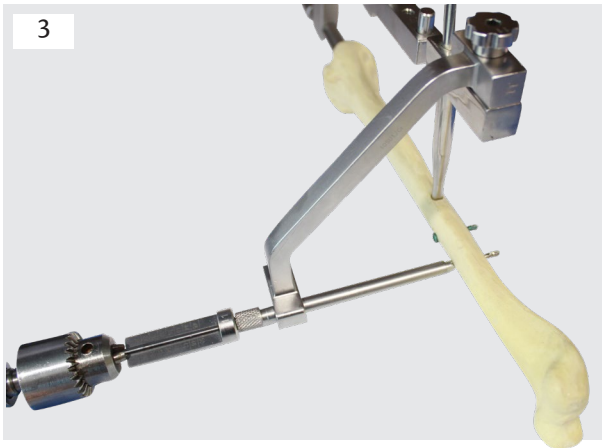
18. Place the locking screw of previously determined length with the help of the screwdriver; it should be completely inside the bone. Confirmation that the nail is locked can be achieved with the help of the guide.

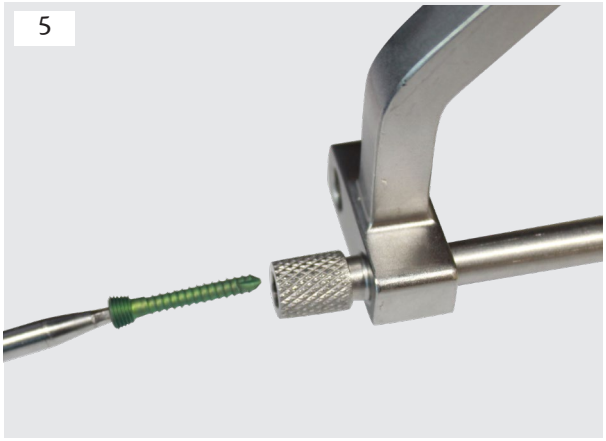


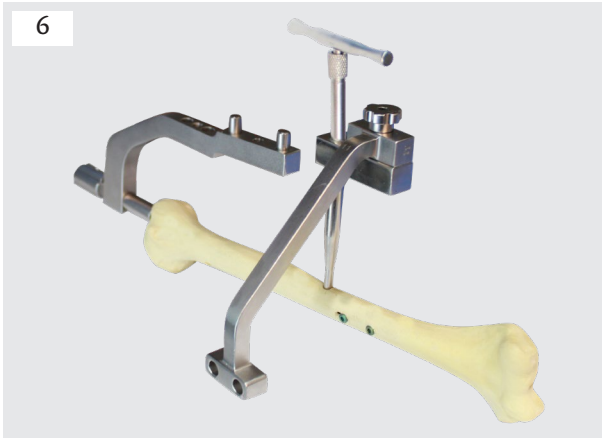
19. Repeat the procedure for the next distal hole.





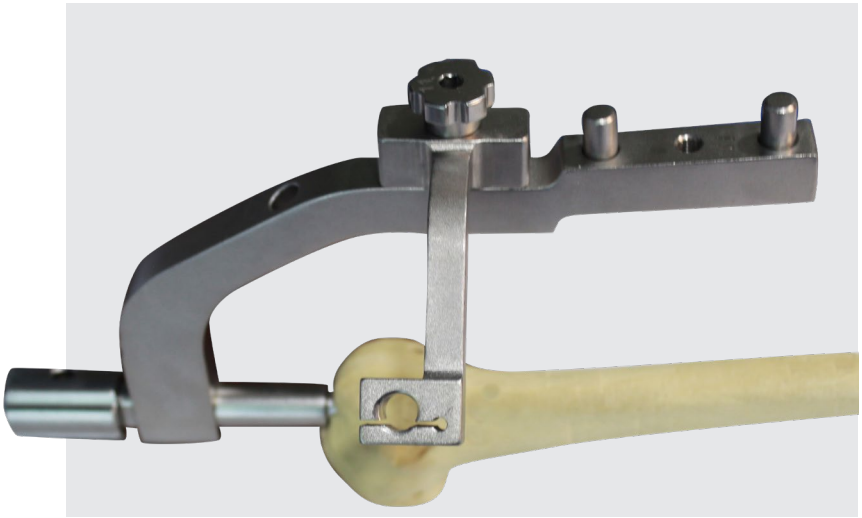




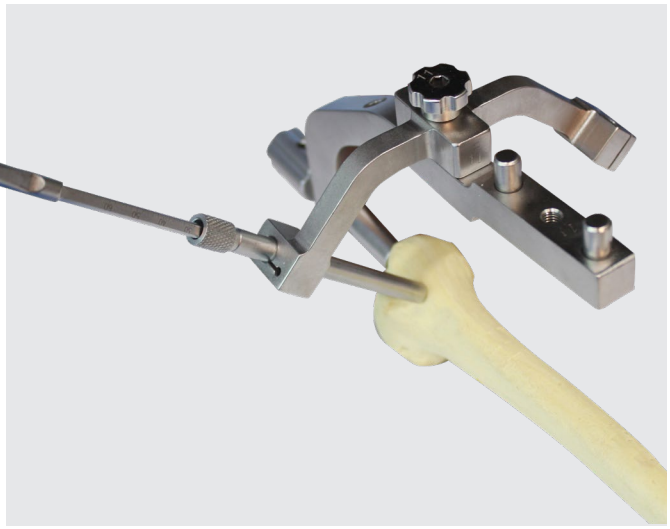


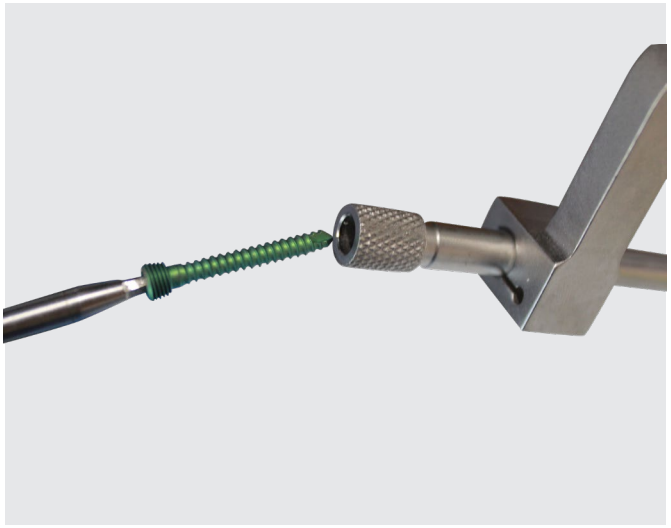
20. Once the distal holes are blocked, remove the distal locking device and disassemble it.

21. Place the proximal locking arm over the U-ruler and fasten it with the screw. Tighten with allen wrench.

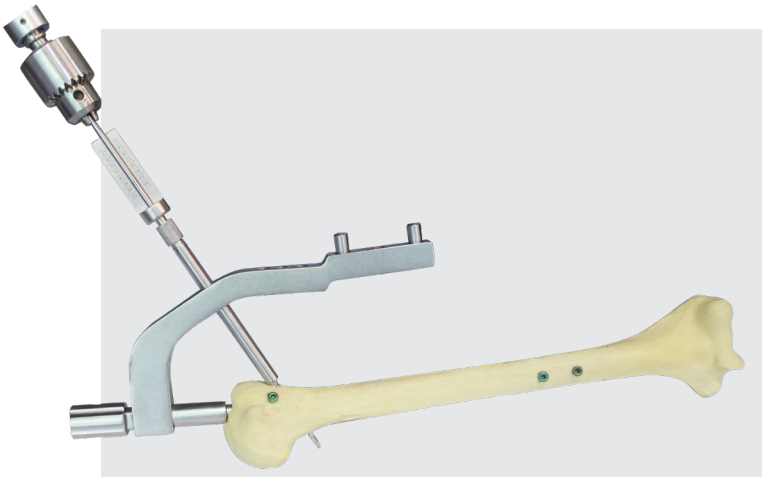


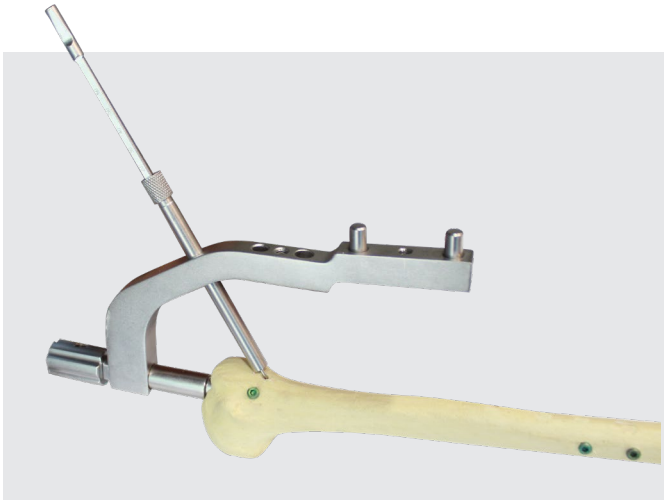
22. Repeat the drilling procedure of both corticals, depth measurement, tapping, drilling and locking screw insertion. Check that it is locked.

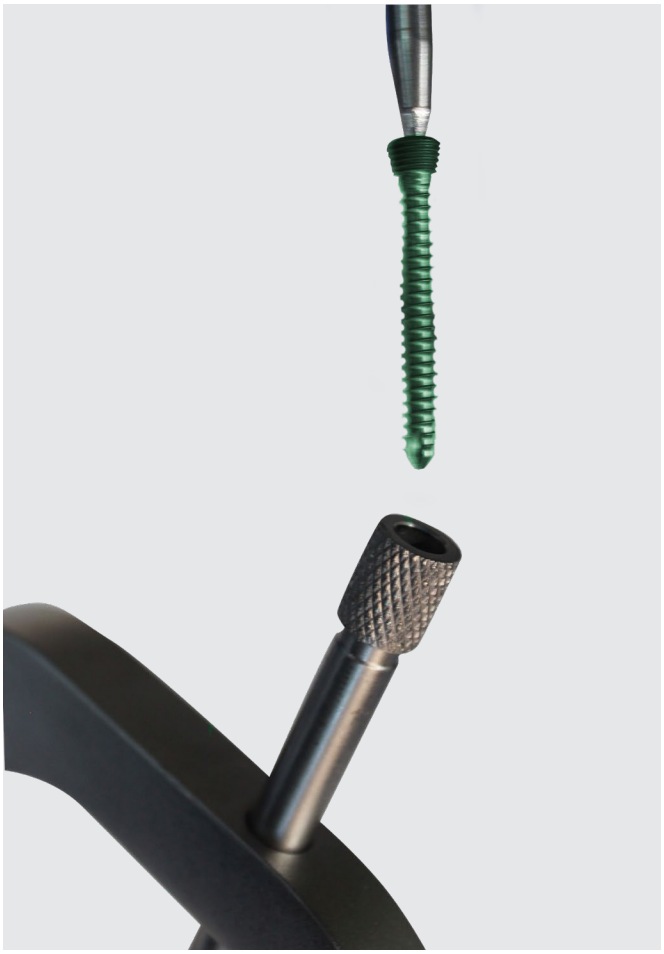


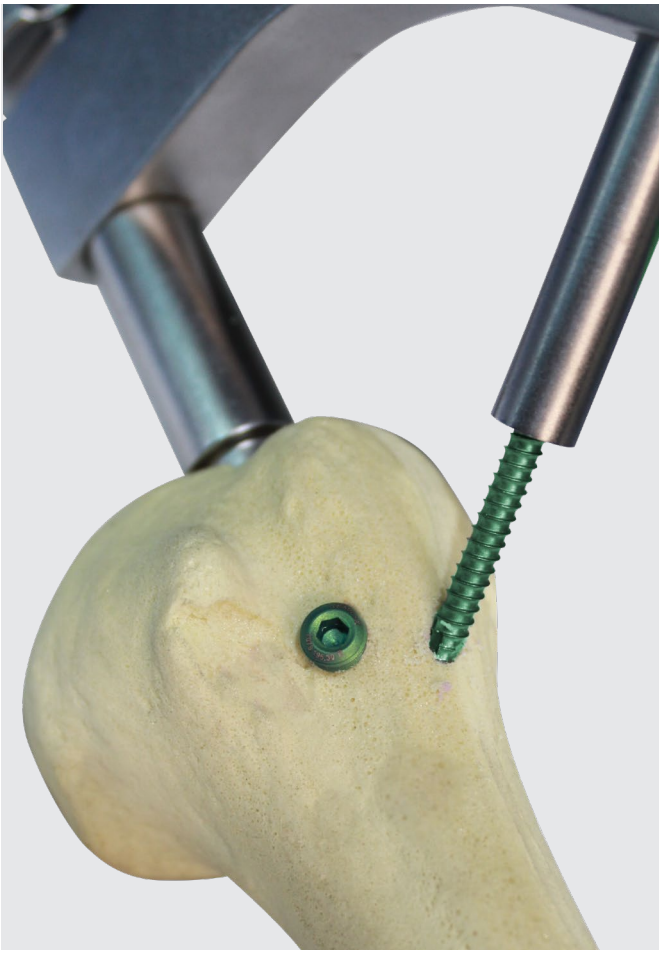


23. Subsequently, if necessary, the angular stability hole in the head of the humerus is blocked, to do this, the inner and outer sleeves are placed in the hole in the U-ruler. Repeat procedure for locking screw placement confirming that it is locked.









24. Continue blocking the next hole in the arm for proximal locking by repeating the procedure.

25. Once both proximal holes are blocked, remove arm and U-ruler.

26. Finally, insert the closing cap.

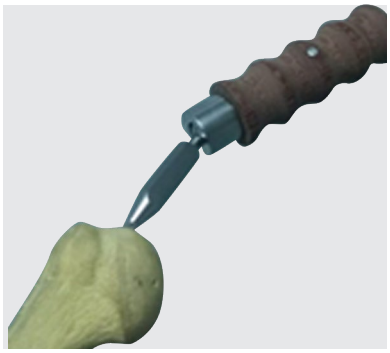
Extraction

1. To remove the nail remove the closing cap (if any)

2. Place the mobile extractor or fastener.

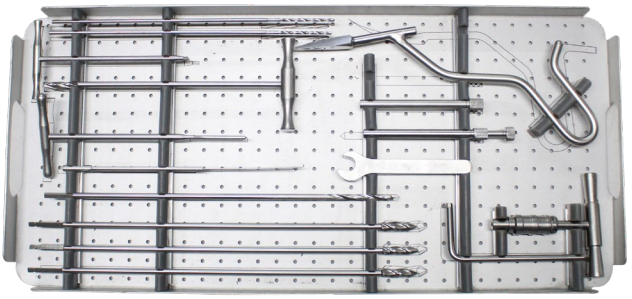
3. With the help of the nail extractor remove.

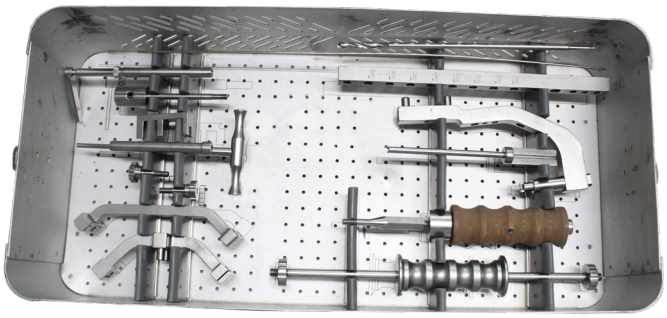
4. If required, use sliding hammer impactor.



HUMERUS NAIL EQUIPMENT

QTY.	EQUIPMENT
1	Initiator punch
1	Punch Ø 6.0
1	Punch sleeve Ø 6.0
1	Drill sleevexterior for graduated guide Ø 6.0
1	AO T-handle for rhymes
1	Allen wrench Ø 5.
1	Spanish wrench Ø12
1	Rime Ø 7.5, Ø 8.0, Ø 8.5
1	Drill bit Ø 5.2
1	Depth Gauge
1	Tap Ø 3.5
1	T-Handle Drill Bit Ø5.0
1	Screwdriver for Bolt Ø3.5
1	Drill Bit Ø2.9
2	Drill Bit Ø2.9
1	Guide without olive Ø2.0
1	U-shaped strip
1	Graduated Drill Guide Ø3.5
1	Nail puller
1	Impactor
1	Drill sleeve interior and exterior for drill bit Ø 5.2 and Ø 8.0
1	Nail Holder
1	Stylus wrench
1	Stylus with T-handle
1	Screw
1	Distal locking arm with stylus
1	Proximal locking arm
1	Blocking rule
1	Shirt 6.3
1	Drill 6.3
1	Depth meter 60mm
1	Wire protector
1	Handle for guide wire
2	Guides 1C/ Olive, 1S/olive
1	Screwdriver Ø 3.5





NOTES

TRAUFIX
READY TO RUN

GRUPO DIPROMEDIC
Medical Devices and Health Solutions
Exclusive distributor in Mexico

GRUPO DIPROMEDIC
INTERDIPRO
Exclusive distributor in Peru

FIXIER S.A. DE C.V.
Carretera Doctor Mora a San Miguel de Allende km 3.4,
C.P. 37967, Comunidad de San Rafael, Doctor Mora,
Guanajuato, México.
Tel. +52 419 688 1191

TRAUFIX
READY TO RUN

www.traufix.com

ISO 9001
ISO 13485

Cód.TQ-024 EN Rev.04