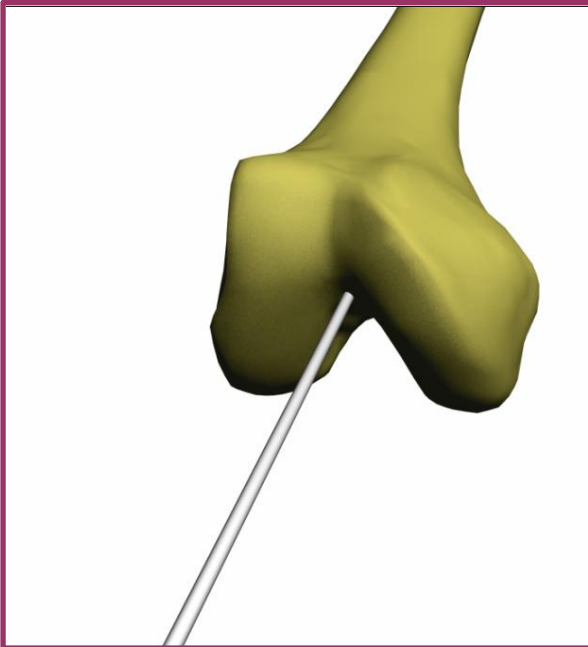


DISTAL FEMORAL NAIL TECHNIQUE



NAIL INSERTION

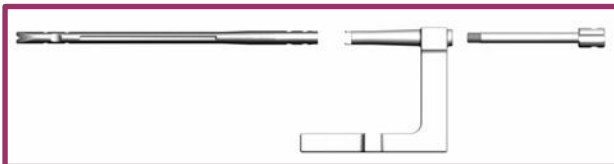
A 4-6 cm medial para-patellar incision is made and the patellar tendon and fat pad retracted to the lateral side. In cases where the patellar tendon cannot be retracted laterally, a trans-patellar tendon approach is advisable.



The entry point is made in the intercondylar notch. With fractures extending into the joint, the intra-articular fracture should be reduced anatomically and stabilized using posteriorly placed lag screws, prior to opening the intercondylar notch.

Entry into the intercondylar notch is made with a Ø 2.5mm Guide Wire placed centrally, anterior to the insertion of the posterior cruciate ligament. The point of entry should be in line with the long axis of the femoral shaft in both the AP and coronal planes. Blumensaat's line is used for the identification of the point of entry in the lateral view.

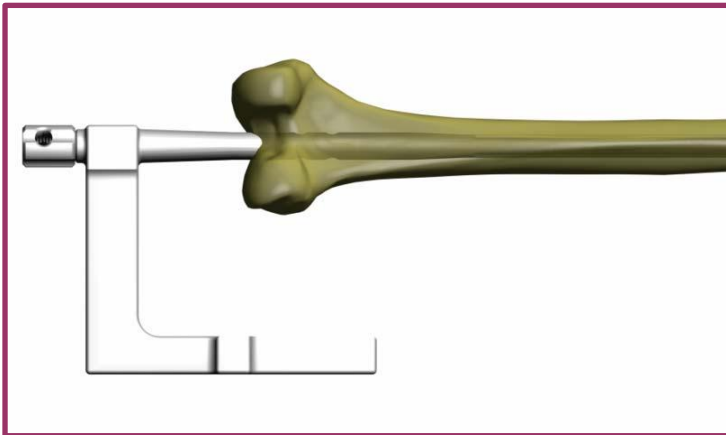
The femoral canal reamed to 1.0 mm more than the proposed nail diameter.



The correct length nail is inserted into the handle and locked into position with SW5 Allen Wrench.



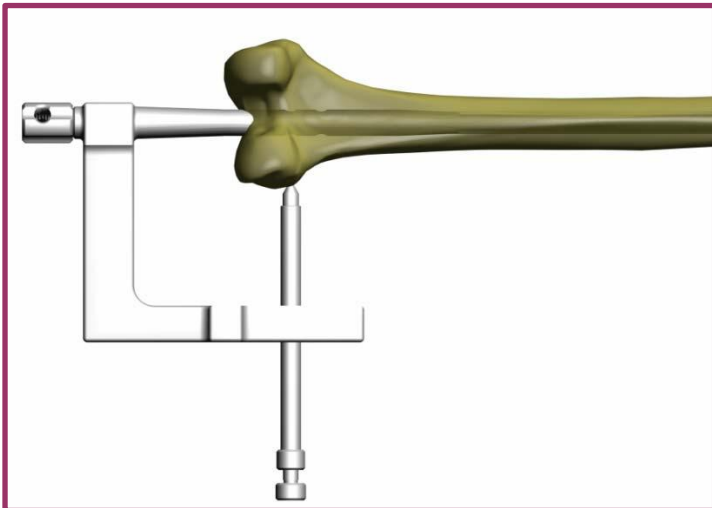
The guide wire is withdrawn.



DISTAL LOCKING

Distal locking is usually performed first from the lateral side.

The nail may be rotated and oblique insertion of the locking screws is possible.

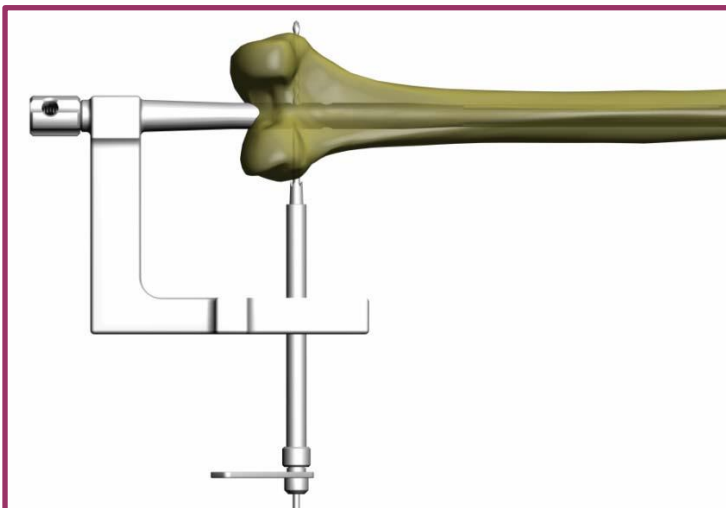


A Screw Guide is inserted into the most proximal of the distal holes in the Nail Support Handle.

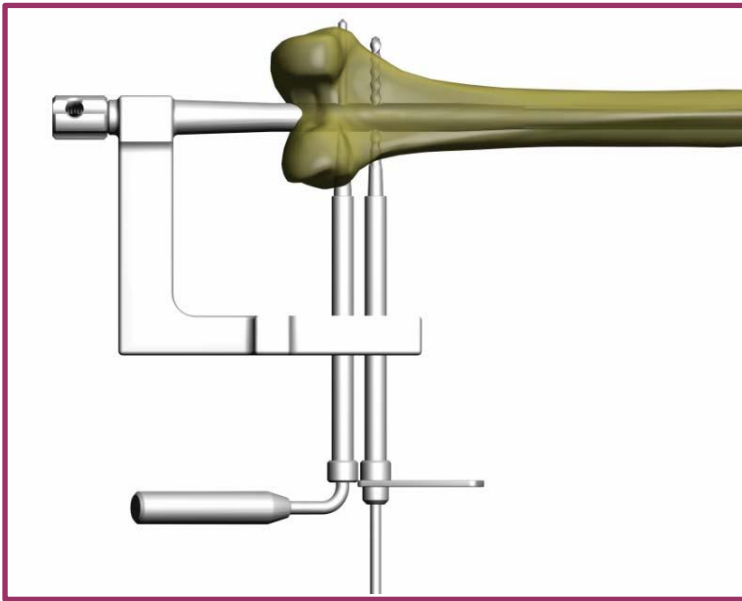
A stab incision is made with blunt dissection down to the bone.

The screw guide is then advanced down to the bone using the Soft Tissue Protector.

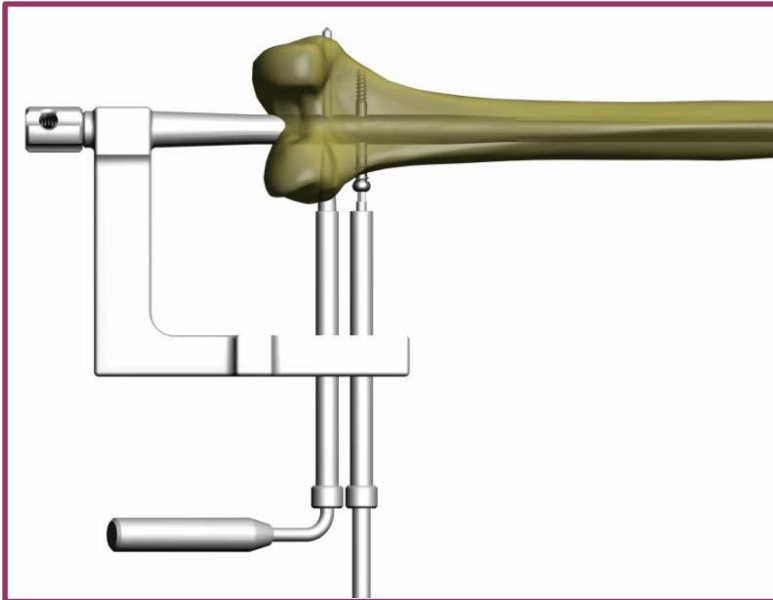
The Soft Tissue Protector is removed, a Drill Guide inserted into the screw guide and gently tapped into the bone.



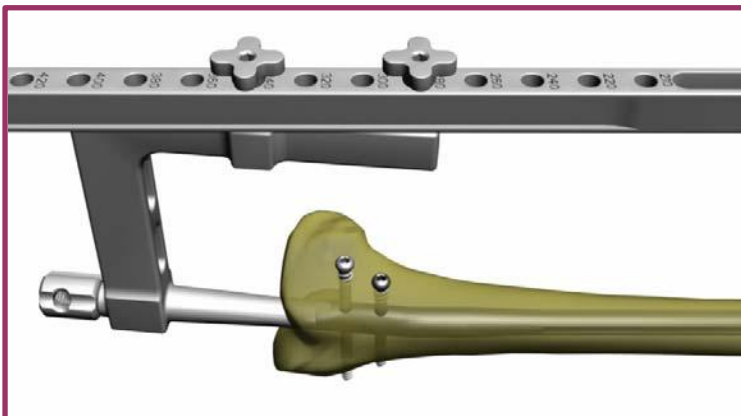
The bone is then drilled with the Ø 4mm Drill Bit.



The drill bit and drill guide are removed and the Graduated Angled Trocar inserted into the screw guide.



The second hole is then drilled in the same manner. The drill bit and drill guide are removed and a locking screw of correct length inserted with the Ø 3.5mm Screw T-Wrench. The Graduated Angled Trocar is removed from the first screw guide and an appropriate length locking screw inserted.

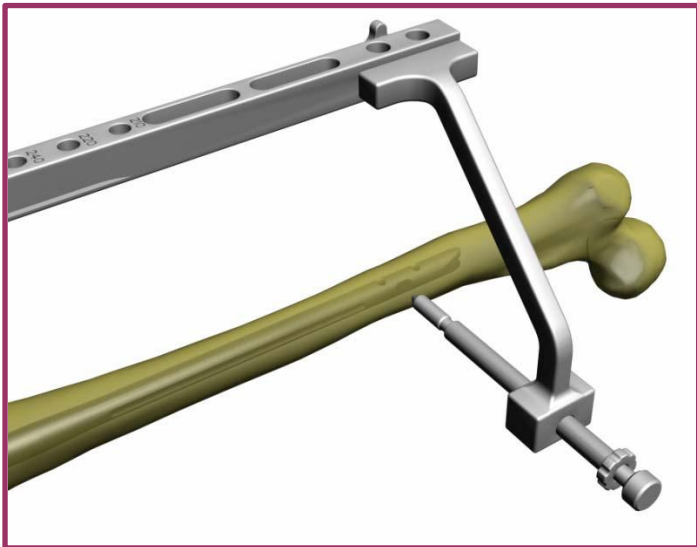


PROXIMAL LOCKING

The Guide Bar is mounted on the Nail Support Handle until the number corresponding to the selected nail length lines up with the front of the handle.



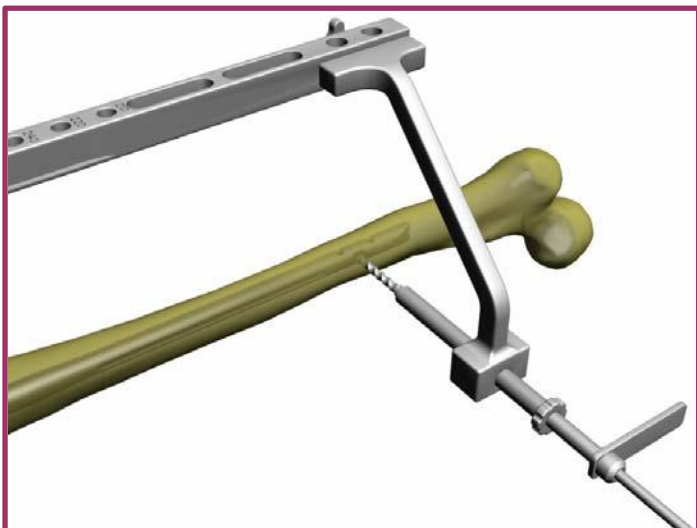
Now the Proximal Outrigger is mounted on the Guide Bar and tightened with Proximal Outrigger Locking Screw.



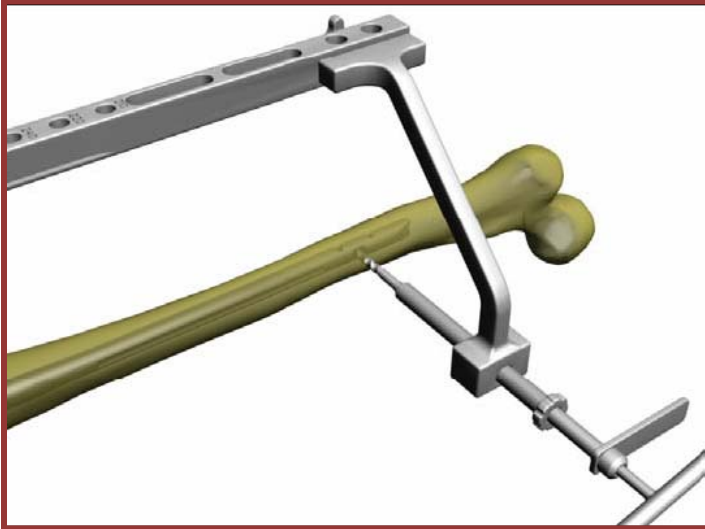
Guides for Stabilizing Rod (\varnothing 10mm / \varnothing 8mm) is inserted through the hole in the outrigger down to the skin anteriorly. A 15 mm longitudinal incision is made at this point, down to the deep fascia.

Note: Careful blunt dissection is required to avoid injury to neurovascular structures.

The Soft Tissue Protector is inserted into the screw guide, and the two pushed together down to the bone.



The Soft Tissue Protector is now withdrawn and the 6 mm drill guide inserted.



The anterior cortex only is then drilled with the \varnothing 5mm Drill bit. Use T-Handled Hand Reamer, (\varnothing 5mm) clean the hole in the bone.



The hand reamer is then removed.

The T-Handled Stabilizing Rod is inserted through the screw guide, contact being confirmed by tapping its tip on to the nail.

The U-Shaped Stabilizing Spacer is now attached so that the upper, narrowest fork fits into the groove in the shaft of the stabilizing rod. The other forks grip the screw guide and the outrigger.

The surgeon maintains this contact throughout.



A screw guide is inserted into one of the proximal holes of the Guide Bar and advanced down to the bone through a stab incision using the Soft Tissue Protector.

The Soft Tissue Protector is removed, a \varnothing 8mm / \varnothing 4mm drill guide inserted into the screw guide and the \varnothing 4mm drill bit used to drill both cortices.



The drill bit and drill guide are removed and the Graduated Angled Trocar inserted into the screw guide, so that it passes through the nail and engages the far cortex.

The second hole is then drilled in the same manner.



A locking screw inserted. The Graduated Angled Trocar is removed and a locking screw inserted into this hole.

Locking screw positions are confirmed with the Image Intensifier.



The T-handled stabilizing rod, screw guide, and outrigger are then removed.



Insert the End Cap

The guide bar and the handle are removed. The End cap can be inserted with the Ø 3.5mm Screw T-Wrench now. The nail end cap must be securely tightened.