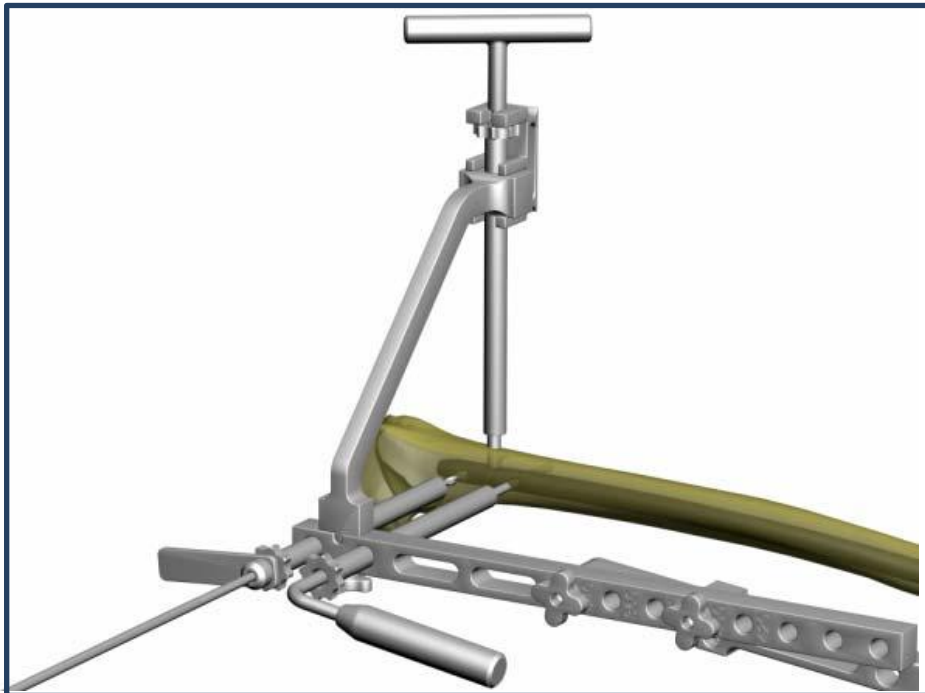
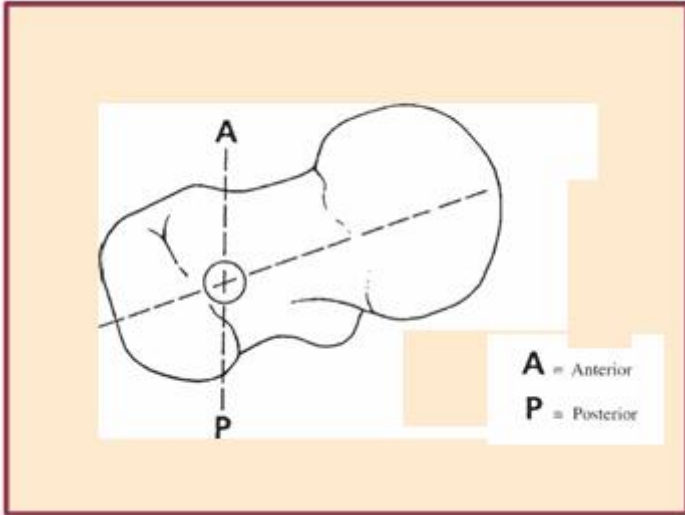


FEMORAL NAILING TECHNIQUE



Whenever possible, femoral fractures should be stabilized within the first 24 hours following injury, provided the patient's condition will allow it. Do not start surgery unless the fracture is well reduced.

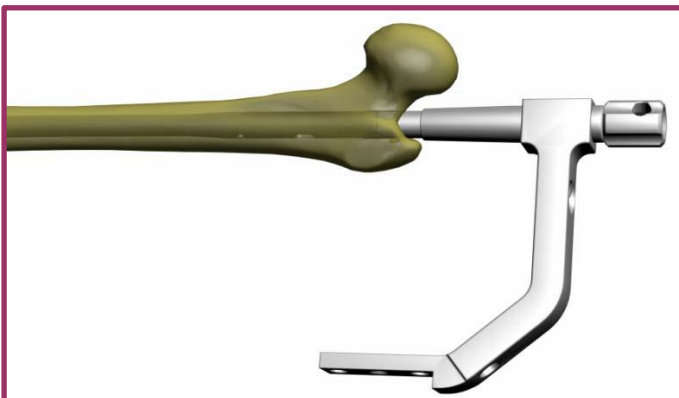


- **INSERTION SITE**

The point of insertion is in the piriform fossa, close to its lateral wall, just medial to the greater trochanter. This point should never be too medial, in order to avoid injury to the Circumflex Femoral Artery.

- **REAMING**

Insert the **Guide Wire** centrally in the medullar canal. This is ensured by driving it down until its tip sits in the subchondral bone exactly on the roof of the intercondylar notch, midway between the femoral condyles.



THE GUIDE WIRE NOW BE REMOVED.

Ream to a width 1-1.5 mm greater than the proposed nail.

NAIL INSERTION

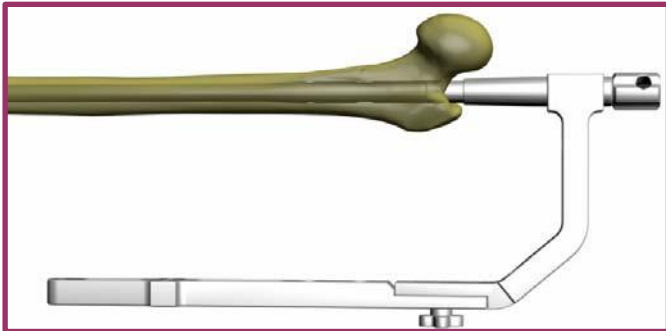
- A Nail of correct diameter and length is now selected. The

Locking Rod is inserted into the back of the **Nail Support Handle** and the chosen nail into the nail support.

Check that the wings are engaged in the nail and tighten firmly with the **Allen Wrench SW5**. Insert the nails by hand. If hammering is considered essential, the Handle for **Impactor** can be used by connecting to the end of the locking rod.

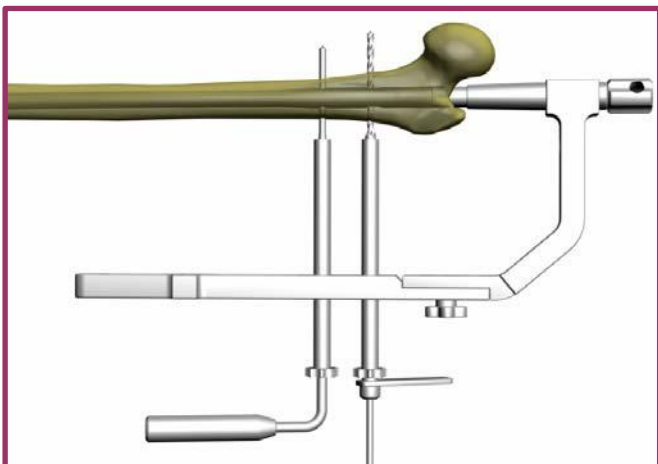
Use image intensification when passing the fracture.

The nail is correctly inserted when the step of the Nail Support Handle is at the same level as the tip of the greater trochanter.



PROXIMAL LOCKING

- The **Proximal Outrigger** is mounted on the Nail Support Handle. The **Internal Nail Template Locking Screw** is inserted into the appropriate holes. It is then locked in this position.



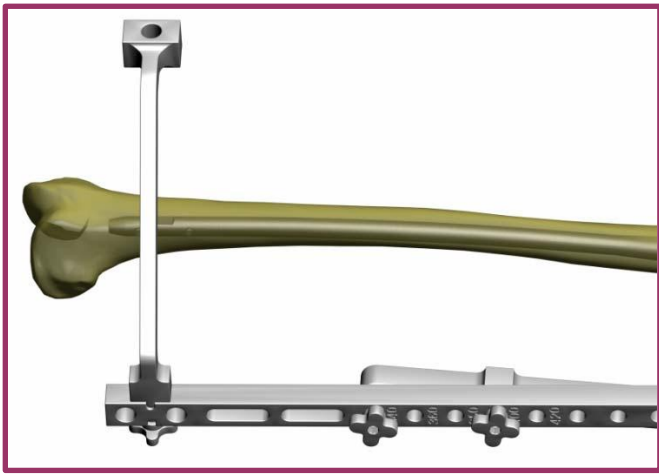
- The ideal locking plane is about 20° anterior to the frontal plane. Make two stab incisions at the level of the holes in the **Proximal Outrigger** and extend them down to the bone with blunt dissection. Insert two **Screw Guides** into the holes in the Proximal Outrigger and push them in turn down to the bone using the **Soft Tissue Protector**. Withdraw the Soft Tissue Protector, Using a **4 mm Drill Bit** and **Drill Guide** inserted into the Screw Guide, drill the first hole. Remove the drill bit with the drill guide and insert the **Graduated angled trocar**. Drill the second hole. Insert the Locking Screws of correct length.

DISTAL LOCKING

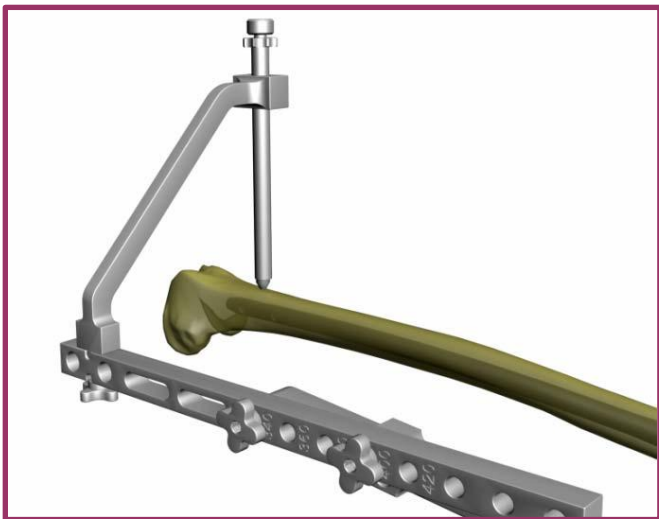
NOTE: Before proceeding with distal locking, check that there is no rotational deformity, and that there is no distraction of the fracture site.



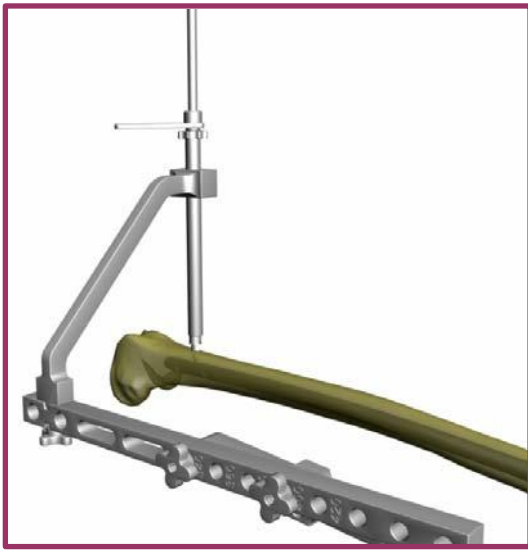
- The **Guide Bar** is attached to the Proximal Outrigger and the **Guide Locking Screw** tighten firmly by hand.



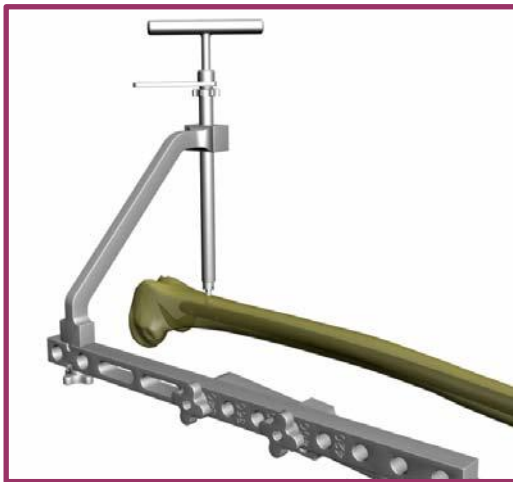
- The **Distal Outrigger** is now attached on the anterior side of the Guide Bar. The **Distal Outrigger Locking Screw** is tightened firmly by hand.



- Insert the **Guide for Stabilizing Rod** through the hole in the outrigger down to the skin anteriorly. Position it over the centre of the femur, make a 15 mm incision at this point and extend it down to the deep fascia. Split the muscles longitudinally down to the bone. Insert the Soft Tissue Protector into the Guide and push the two together down to the bone. The position of the Guide Bbar and the Distal outrigger relative to the femur should be adjusted in the lateral view so that the Guide meets the surface of the bone at 90°, to avoid oblique perforation of the anterior cortex.



- Withdraw the Soft Tissue Protector, insert the **6 mm Drill Guide** and drill the anterior cortex with the **6 mm Drill Bit**.

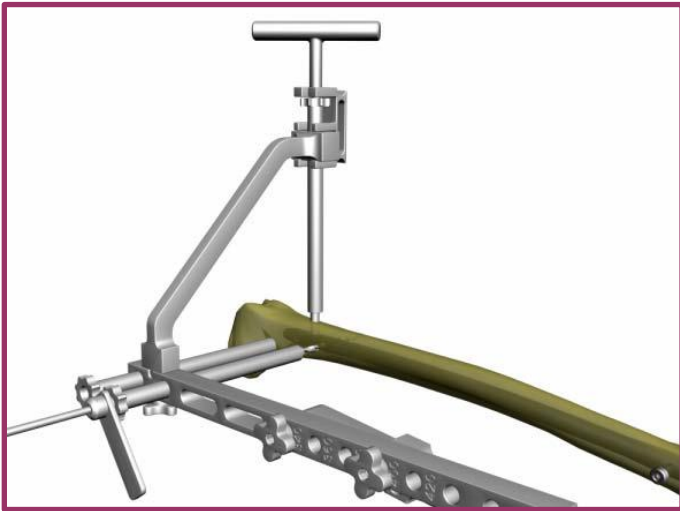


- Clear the hole in the bone with the **6 mm T-Handled Hand Reamer**.



- Remove the **6 mm T-Handled Hand Reamer** and insert the **T-Handled Stabilizing Rod** through the screw guide, down to the nail, tapping the nail to ensure contact. Attach the **U-shaped Stabilizing Spacer** to the T-Handled Stabilizing Rod.

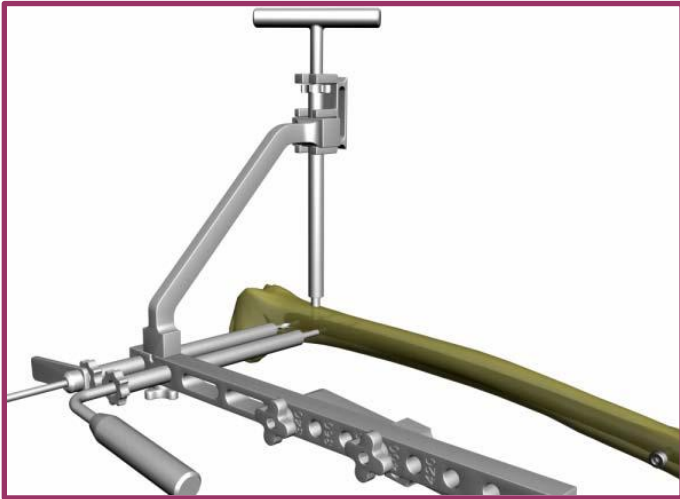




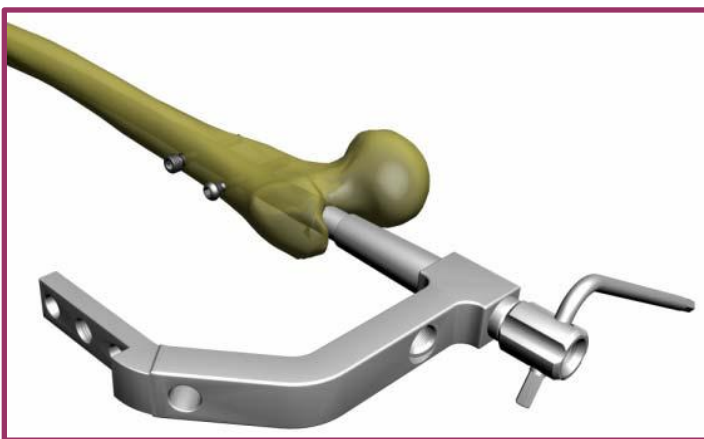
Maintaining contact between the tip of the Stabilizing Rod and

- the nail, insert two Screw Guides through the holes in the Distal Outrigger. Make a single 4-5 cm incision over the points of contact with the skin. Advance the more proximal screw guide down to the bone. Insert a **4 mm Drill Guide** into this Screw Guide and drill the bone with the **4 mm Drill Bit**.

While drilling, grip the T-handle of the Stabilizing Rod, to keep its tip against the nail, and maintain this position throughout the drilling procedure.

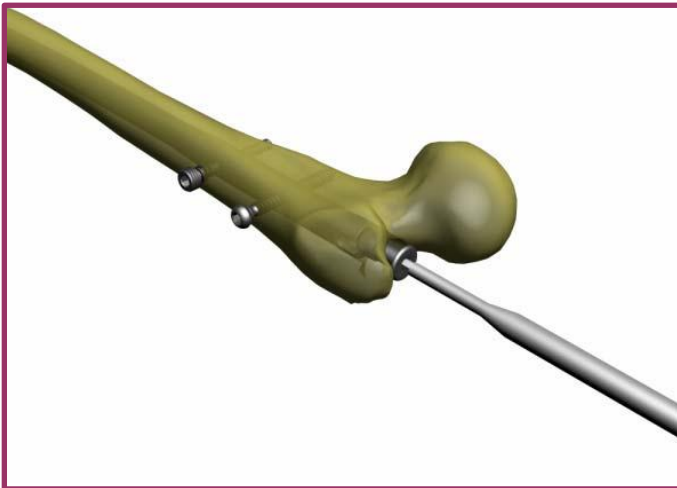


- Remove the Drill Bit and Drill Guide, and insert the Graduated angled trocar. Advance the second screw guide and drill the second hole in the same way. Insert the locking screws of correct length.



REMOVAL OF THE HANDLE AND CLOSURE

- Before removing the handle from the nail, check correct insertion of locking screws both in the AP and lateral planes.



- Remove the handle and the locking rod and insert the nail **End Cap** and leave the top of the nail end cap flush with, or just above, the tip of the greater trochanter.