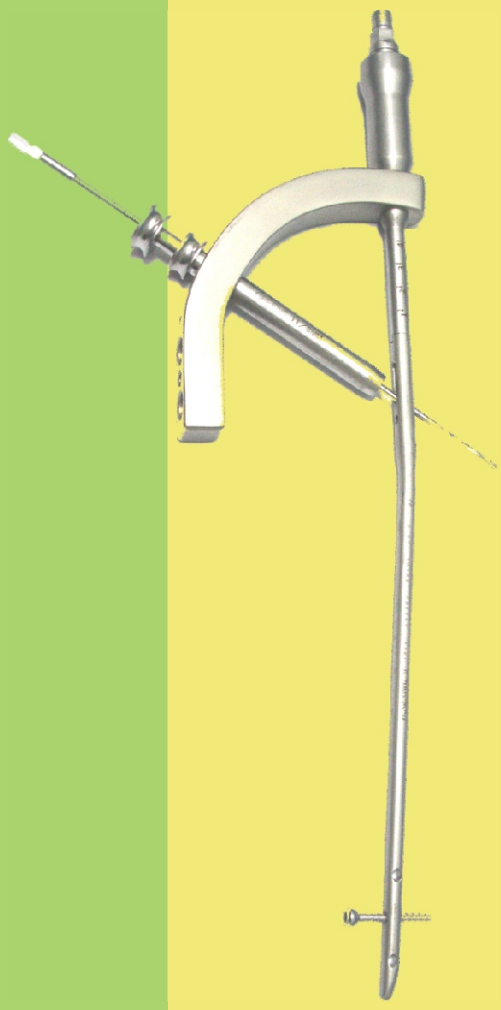
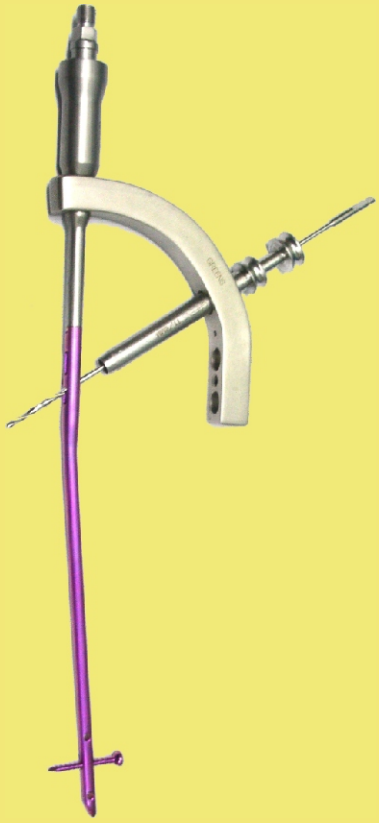
(ISO 9001: 2000 & CE Certified)

UHN

LITERATURE





GREENS UHN Set
Complete solution for UHN Interlocking

GREENS®

Features-

1. Antegrade as well as rectograde nailing
2. Distal Locking anteroposterior as well as Lat-medical
3. May eliminate an existing fracture gap of 10mm
4. Solid Nail. Subsequent Compression, May also be given after osteolysis at the fracture site
5. Available in different length varying at 1cm from 19cm to 31cm
6. The end cap (Top Screw) protect the inner thread of the nail from the tissue in growth and facilitates subsequent implant removal. End caps are provided in 4 lengths. 0,5,10,15mm extension, which helps to extend the nail length if desired. This allows free positioning of the locking holes into areas with good bone quality.

Provision of oblique placement of screw in proximal fragment.

Instrument Set Detail -

1- Insertion Handle for UHN
2-Compression Device for UHN
3- Connecting Screw for UHN
4- Compression Connecting Screw
5- Coupling Block for UHN extraction
6- Inserter / Extractor for UHN
7- Slotted Hammer
8- Awl with T-Handle (Cannulated)
9- Projectile Reamer (Coupling end)
10- Protection Sleeve 11.0 / 8.0
11- Drill Sleeve 8.0 / 2.7
12- Trocar 8.0mm
13- Depth Guage for Locking bolt
14- Drill Bit 2.7mm Extra Long (Q.C)
15- Combination Wrench
16- Distal Jig

Antegrade Insertion-

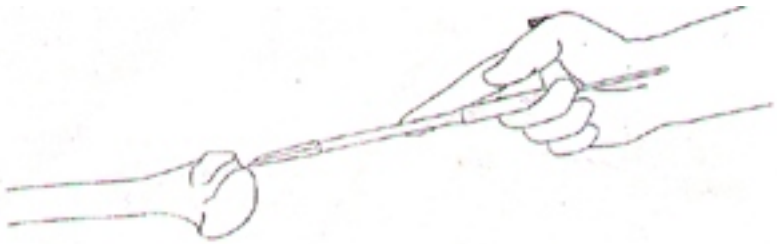
Humeral shaft fractures, distal and proximal third

Patient positioning : Place the patient supine in a semi-reclined position with a bolster under the shoulder. Turn the patient's head away from the injured side to maximize exposure of the shoulder

Determinattion of implant Length:- Determine the approximate nail length preoperatively by measuring the uninjured humerus from the top of the humeral head to the superior aspect of the olecranon fossa and subtracting 3-4 cmThe correct implant length can only be determined at the injured limb after fracture reduction.

Insertion site preparation: The entry point must be in line with the medullary canal. This is usually at the margin of the articular surface medial to the greater tuberosity.Incisr the skin just lateral to the acromion, and split the deltoid muscle in line with its fibres. Palpate the tuberosity and identify the supraspinatus tendon, without exposing it. Incise the mid-tendon in line with its fibres. Be careful not to injure the rotator cuff. The arm can be adducted across the chest to gain better access to the proximal humerus.

Using the straight Cannulated Awl with T-handle, insert the K-Wire into the proximal humerus at the correct entry point. Pass the wire under image intensification directly into the medullary canal, release the wire by loosening the nut, and open the medullary cavity with the awl



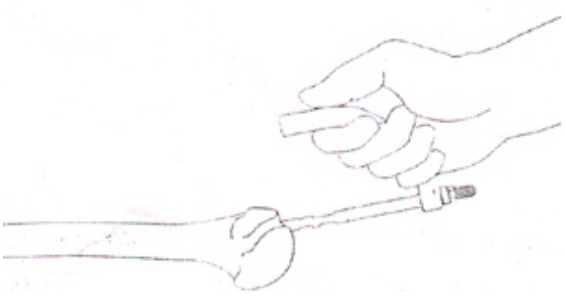
Nail/ Instrument Assembly : Couple the correct length nail with the insertion handle making sure that the apex of the nail's bend is pointing away from the insertion handle. Manually thread the connecting screw into the nail, and tighten with the 11mm Combination Wrench.

Important:- If there is a fracture gap to eliminate, the compression device has to be coupled to the insertion handle..

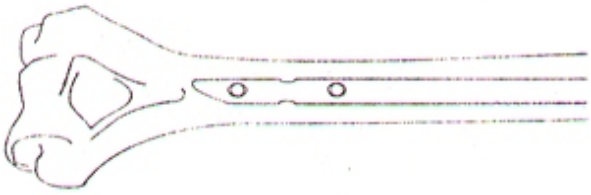
Nail Insertion:-Insert the nail manually as far as possible. Continue to insert the nail up to the fracture line, then reduce the fracture and monitor the passing of the fracture line with the image intensifier. Manipulate with care especially in fractures in the range between the middle to distal third in order not to damage the Nervus radialis

Incase of preoperative radial nerve palsy, an exploration of the radial nerve through a short anteriolateral incision at the transition of the middle to the distal shaft third may be necessary

If needed, the Insertor / Extractor can be threaded onto the end of the connecting screw. Light blows with the slotted hammer may support the insertion but are normally not needed. Do not tap on the insertion handle, this might impair its accuracy



If the nail does not pass easily, it may be adequate to enlarge the humeral opening with a hand reamer in order to avoid latrogenic fractures. Never insert the nail under great force



Pressure against the humeral head when inserting the nail prevents diastasis and disturbances in the healing process possibly related to it. Bury the nail completely into the humeral head preferably to 10mm to avoid subsequent irritation of the shoulder structure even when the arm is abducted (impingement syndrome). Finally nail length may be adjusted with the end cap.

Distal Locking:- Reconfirm reduction of the distal fragment as inserting the nail may create a fracture line.

If the nail tip has reached its final position, first lock distally with the distal locking device or with standard freehand locking technique. Be careful not to injure the brachial artery or the median nerve with the drill bit.

Determine the correct bolt length with the Depth gauge for Locking bolt.

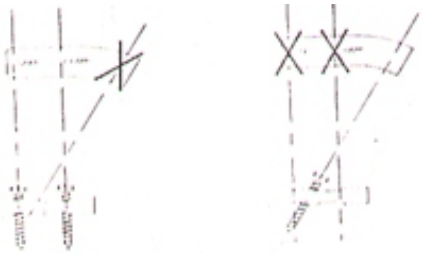
Proximal Locking:- Lock proximally by means of the insertion handle.If you use the caliberated drill bit, you may directly read the correct locking bolt length off the end of the end of the drill bit protruding out of the drill sleeve.

Alternatively use the Depth guage for Locking Bolts.

Note:- When using the depth guage for locking bolts, add 2 mm to the measurement to ensure full engagement of the far cortex.

In each main fragment, especially in short ones, place two locking bolts.

lease note that the placement of a locking bolt in the oblique locking hole prohibits placement of a second locking bolt through the transverse hole or through the slot.



Compression Device:- The humerus is a hanging extremity. As opposed to femur and tibia when dynamically loaded there is not automatically a compact reduction. A fracture gap can lead to a non-or delayed-union, though.

The compression device allows a sensitive compression of the two fragments in order to eliminate an existing fracture gap.

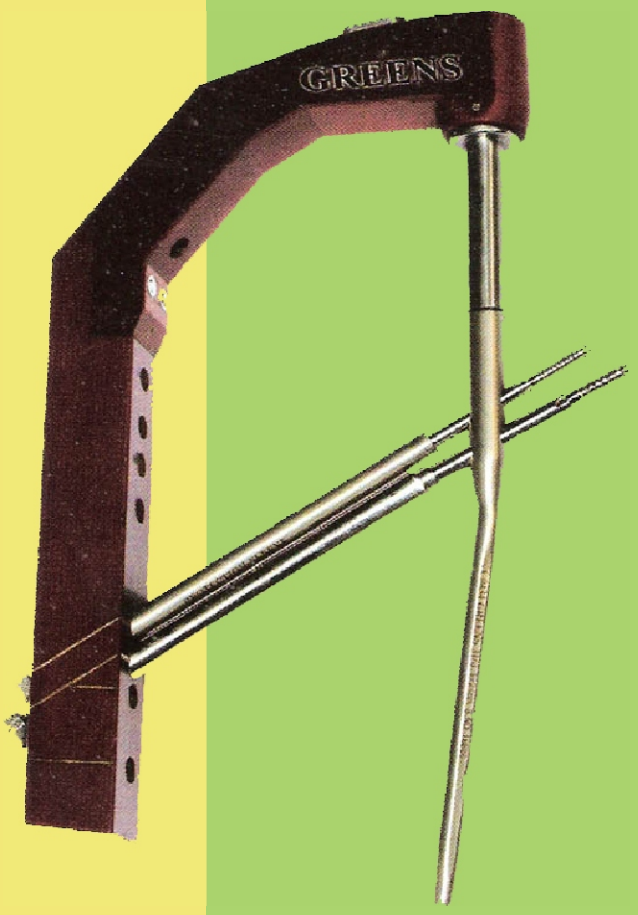
The compression device is fixed to the nail with the compression connecting screw. The nail is inserted into the medullary canal and locked at the tip. A bolt is introduced into the compression slot. By tightening the nut, the bolt and with it the whole fragment are moved towards the nail tip. Check under the image intensifier when the gap is closed.

It is important to take into account the protruding of the nail at the insertion site after the compression.

To hold the achieved reduction, a second bolt has to be introduced into the static hole. The compression device is now removed and an end cap is inserted into the nail.

MASTER Instrumentation

Answer to all INTERLOCKINGS



1- Proximal Femoral Nail (PFN)
2- Reconstruction Nail
3- Femur Interlocks
4- Supracondylar Interlocks
5- Tibial Interlocks

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