



HARPOON™ provides an elegant and user friendly approach to percutaneously treating small bone fractures in lower and upper extremities eg.:

Lower Extremities

Metatarsal fractures
Lisfranc fractures
Midfoot arthrodesis
Forefoot arthrodesis

Upper Extremities

Finger arthrodesis
Scaphoid fractures
Bennets fractures
Radial head fractures
Olecranon fractures



Under radiolucent management **HARPOON™** permits:

- Percutaneous delivery
- No pre drilling required
- Optimum device placement
- Optimal fracture site compression with a choice of compression fittings.
- Non-theatre retrieval of device

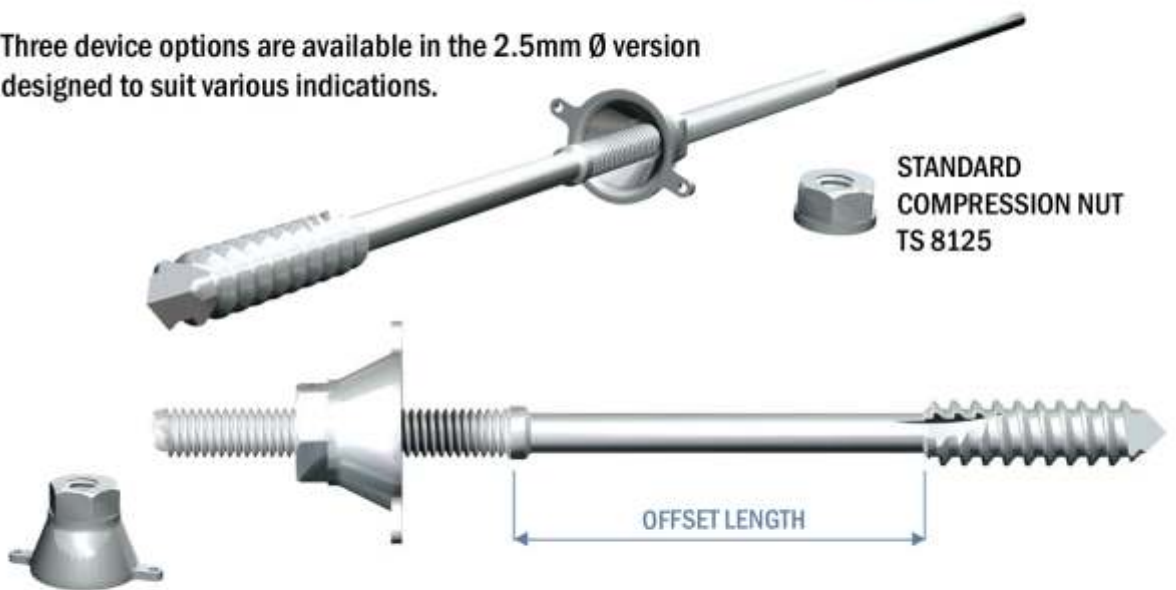
Three device options are available in the 2.5mm Ø version designed to suit various indications.



20mm OFFSET - TS 8120

10mm OFFSET - TS 8121

5mm OFFSET - TS 8122



FLANGED
COMPRESSION NUT
TS 8124

STANDARD
COMPRESSION NUT
TS 8125

OFFSET LENGTH



Suggested Technique: HARPOON™ FIXATION DEVICES - ST#033/05

Under image guidance the chosen device is slowly power driven via a standard cannulated chuck, which is located on the non-threaded shank of the implant with the chosen compression fitting running free on the non-treaded shank of the implant (Fig. 1). The trocar tip of the device is advanced through the cotice as per (Fig. 1) with the aid of a skin protector/drill guide, which encourages a clean and direct entry into the cortice. As soon as 50% of the leading anchor thread has penetrated the site detach the skin protector/drill guide as in Fig. 1.



Fig 1

The device is advanced past the fracture site and with the leading anchor thread penetrating the cortice distal fragment. In all indications the device must be placed so as the polished un-threaded section of the implant bridges the fracture site as in Fig. 2.



Fig 2

Advance the cannulated instrument (Fig 3) to gently drive the compression device compressing the fracture site. The compression fitting should rest and load bear on the cortex at the entry point (Fig. 4 & 5).



Fig 3

Additional stability may be obtained via the use either soft surgical wire provided or by suitable sutures. The fracture site compression should be reconfirmed using fluroscopy.

The fracture site is now ready for the final reduction and compression.

Care should be taken not to OVER COMPRESS the site.

In situations where the compression device sits too prominently the entry point could be enlarged using our cannulated chamfering tool provided that once chamfered there is still cortical support for the compression device. The surplus shank of the implant can now be cut flush with the compression device (Fig. 5) using our dedicated cutter.



Fig 4

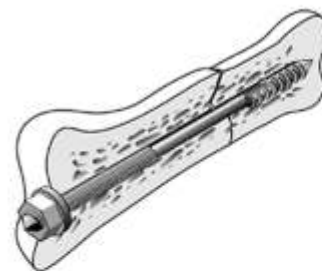


Fig 5



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