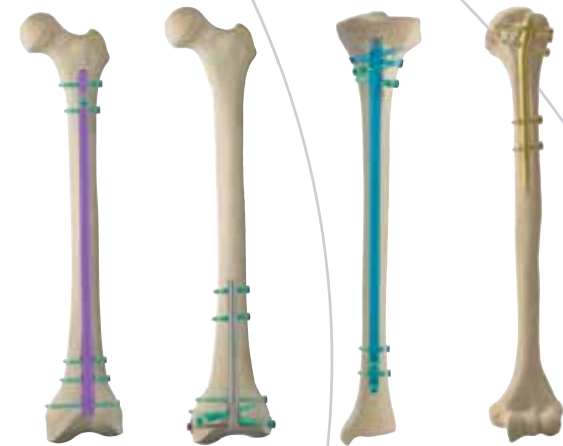


TARGETING YOUR NEEDS

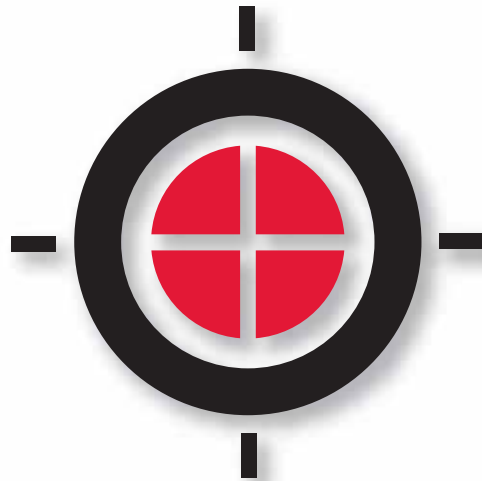


CentroNail is a Complete Intramedullary Nailing System



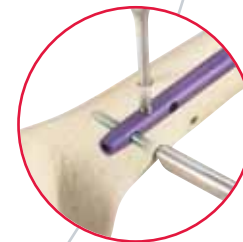
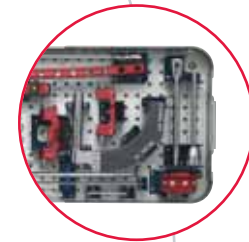
THE CENTRONAIL NAILING SYSTEM

The CentroNail family utilises nail-connected distal targeting which is accurate in all anatomical sites and minimises fluoroscopy time. The system is colour coded and the instrumentation is universal, all to increase ease of use and decrease inventory.



T A R G E T I N G Y O U R N E E D S

- **Ease of use:** Colour coded systems
- **Reduced Inventory:** Universal instruments
- **Versatile:** Multiple proximal and distal locking options
- **Nail Connected Distal Targeting:** Accurate screw insertion and reduced X-ray exposure
- **Titanium Nails and Locking Screws**



- A versatile universal nail with multiple locking options to treat femoral fractures
- One design for left and right femur
- Antegrade and retrograde insertion
- 2500 mm radius matches the average femoral procurvatum



Antegrade
Diaphyseal fractures



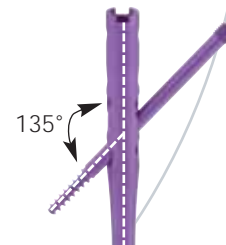
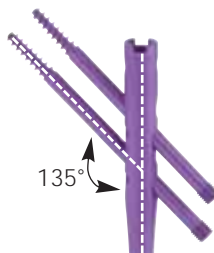
Retrograde
Pregnancy
Pre-existing proximal femoral implants
Polytrauma
Bilateral femoral fractures



Reconstruction
Neck and diaphyseal fractures
Pertrochanteric fractures
Subtrochanteric fractures



Oblique
Subtrochanteric fractures
Shaft fractures



Centronail Femoral Specific Instruments Box



FEMORAL APPLICATION RECONSTRUCTION

• 80-Year-Old Male • Fell off a tree • Subtrochanteric fracture with diaphyseal extension single injury



Pre-operative

1 Week FU

FEMORAL APPLICATION ANTEGRADE

• 33-Year-Old Male • Polytrauma ISS 45 • AO 32-C3
 • Primary damage control orthopedics • Change to IM nail on day 9



Pre-operative

Post-operative

6 Months FU

FEMORAL APPLICATION RETROGRADE

• 21-Year-Old Female • Polytrauma ISS 18 Closed Femoral Fracture
 • AO 32-A2 • Lung Contusion Prolonged Shock



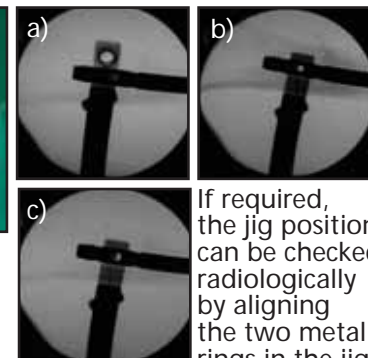
Closed Femoral Fracture

10 Months FU

14 Months FU



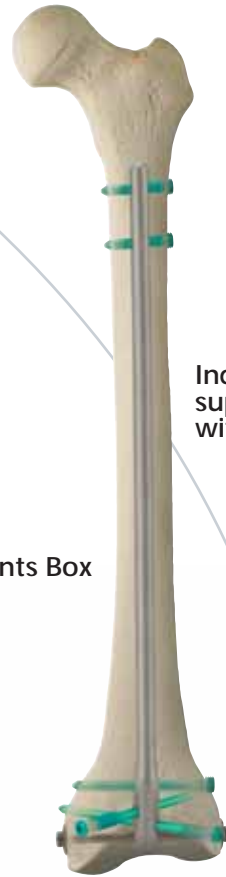
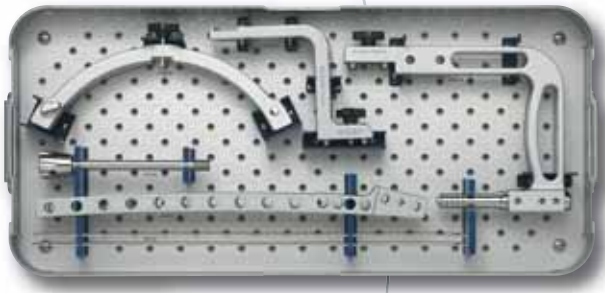
Distal Targeting



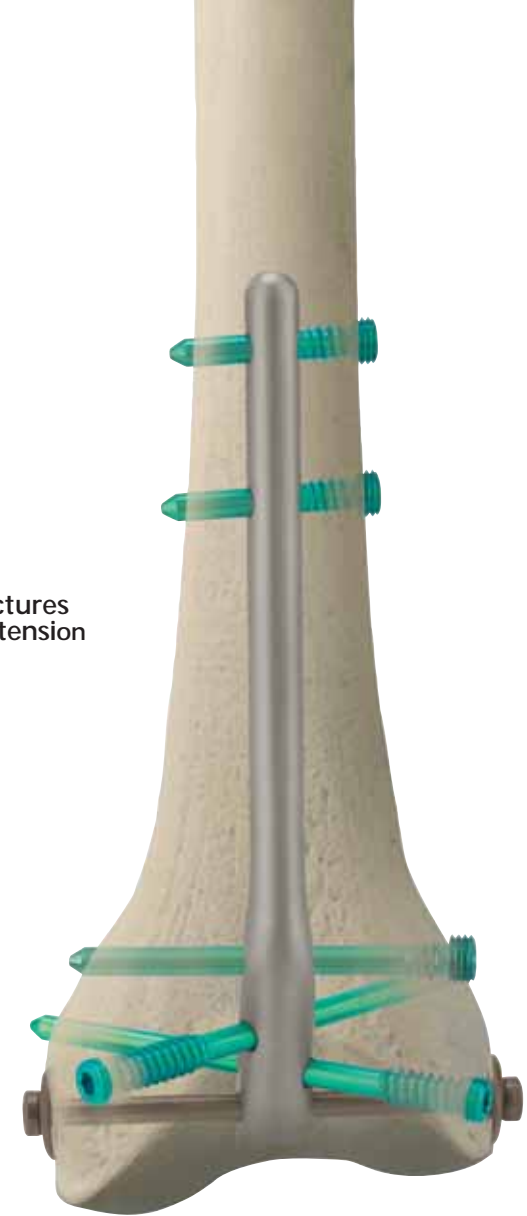
If required, the jig position can be checked radiologically by aligning the two metal rings in the jig (a) with the nail (b,c)

- One design for left or right femur
- 2500 mm radius matches the average femoral procurvatum
- Shortest supracondylar nail available, lengths from 130 mm to 375 mm
- 10° distal bend accommodates anatomy
- Multiple distal locking options in different planes

Centronail Supracondylar and Retrograde Specific Instruments Box



Indicated for
supracondylar fractures
with diaphyseal extension



Indicated for
inter- and supra-condylar fractures

FEMORAL APPLICATION

• 63-Year-Old Male • Pathological fracture (secondary from renal cancer)



Pre-operative

Post-operative

FEMORAL APPLICATION

• 73-Year-Old Female • Closed supracondylar fracture

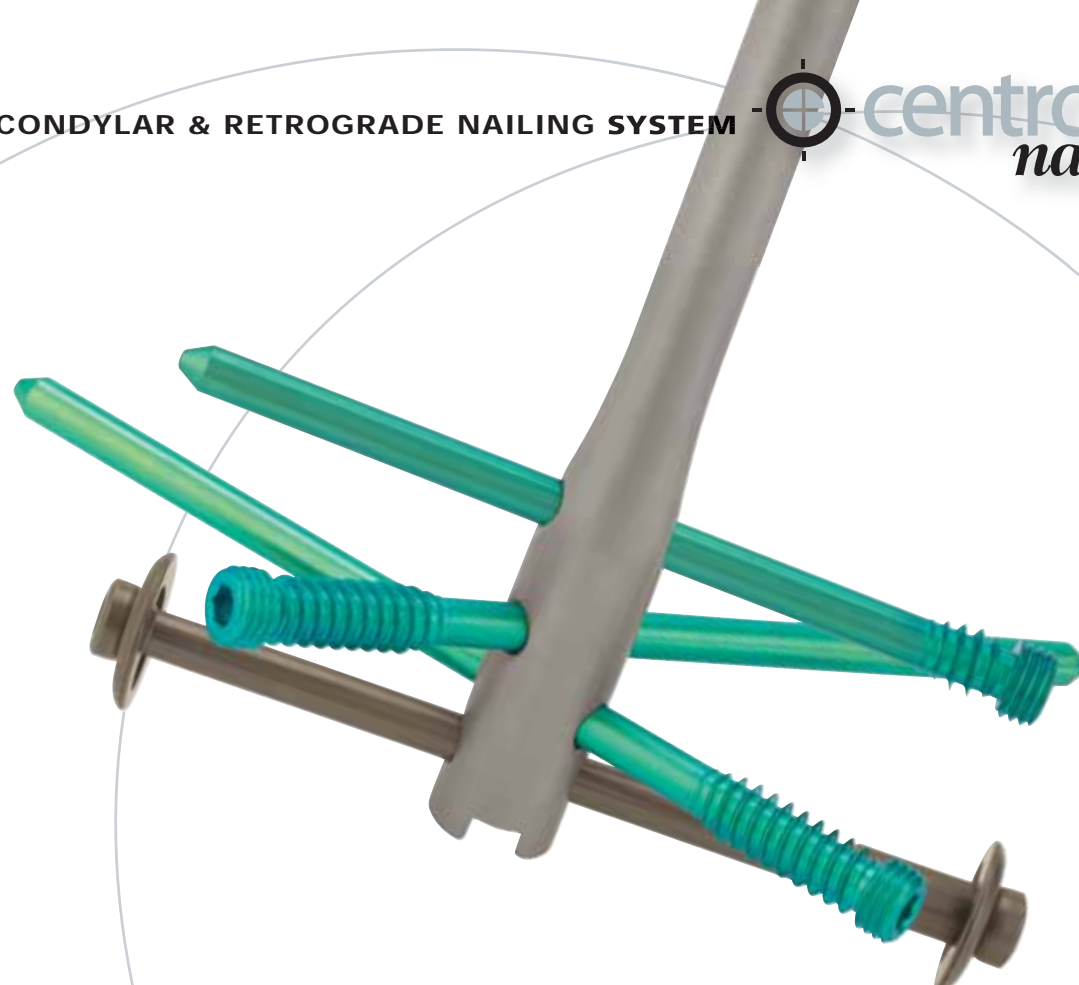


Pre-operative
Drill result of
previous surgery

Post-operative

4 Months FU

Clinical at 4 Months FU



- Multiple locking options extend nailing indications
- Nail and screw design provide good fatigue resistance
- Addresses anatomic needs of fracture fixation
- Position of distal locking screw at 5 mm from nail tip allows to head very distal tibial fractures.

Centronail Tibial Specific Instruments Box



For proximal fractures, 2 additional fully threaded locking screws can be used for extra stability

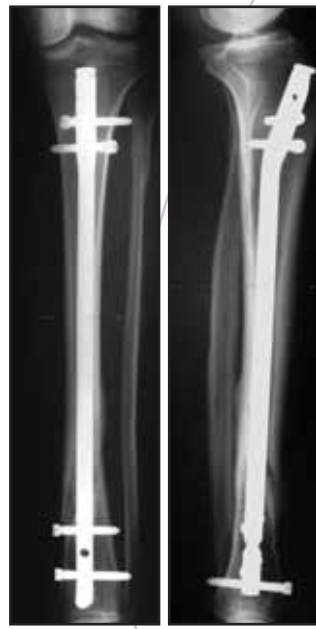


TIBIAL APPLICATION

- 53-Year-Old Female • AO 42-B1.2 Closed Fracture
- Single Injury



Pre-operative



4.5 Months FU. Fracture healed

TIBIAL APPLICATION

- 43-Year-Old Male • Closed AO 42-B1.2 plus ankle fracture • Tibial nail and distal fibular plate
- Note posterior Volkmann's triangle fixed by one fully threaded locking screw and an additional lag screw



Pre-operative



Post-operative



18 Months FU

- One design for left or right humerus
- Proximal bend 15°
- Proximal Humeral Nail: Short (150 mm and Long (185-320 mm, in 15 mm increments). Antegrade insertion only
- Diaphyseal Humeral Nail: antegrade and retrograde insertion

Centronail Humeral Complete Instruments Box
(includes also general instruments required)



Proximal Short



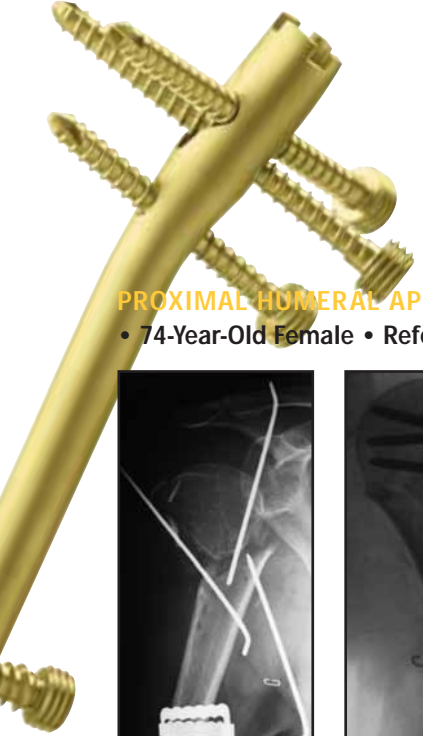
Proximal Long



Diaphyseal Antegrade

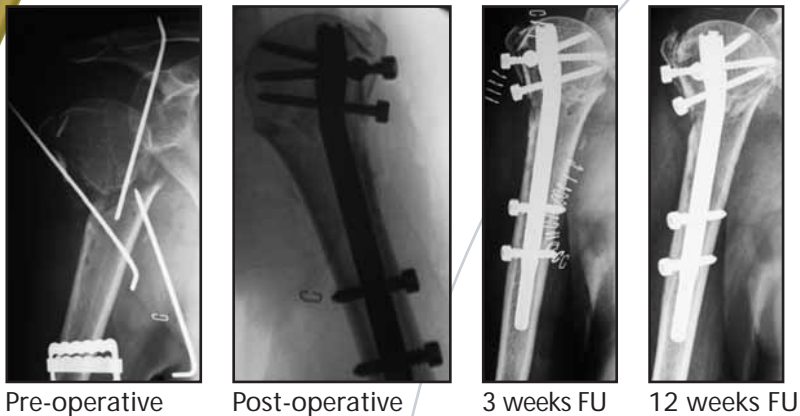


Diaphyseal Retrograde



PROXIMAL HUMERAL APPLICATION*

• 74-Year-Old Female • Referred from other centre after 1 month



HUMERAL DIAPHYSEAL APPLICATION ANTEGRADE*

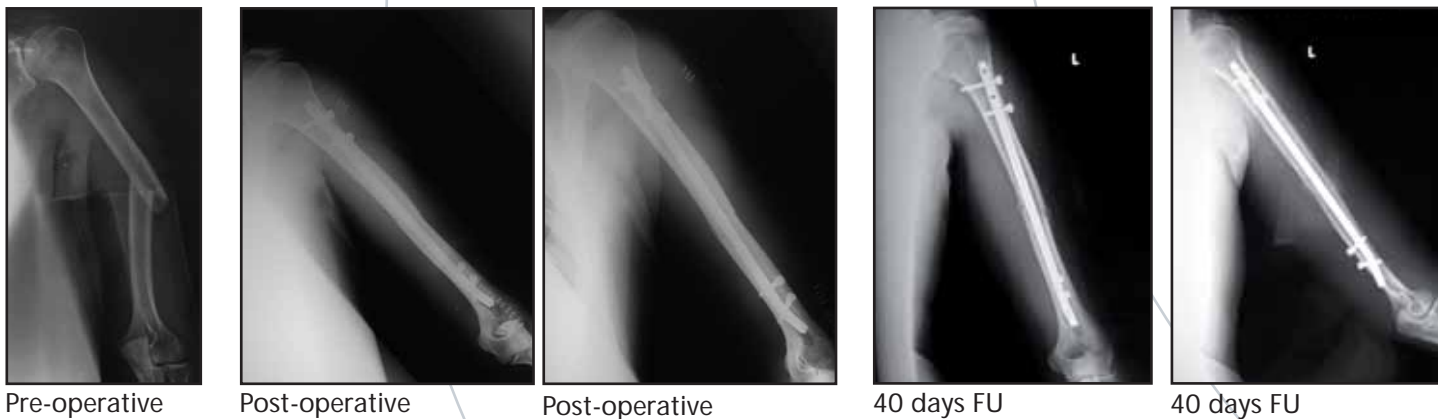
• 30-Year-Old Female



* Case studies provided by Mario Manca, MD, Viareggio, Lucca, Italy

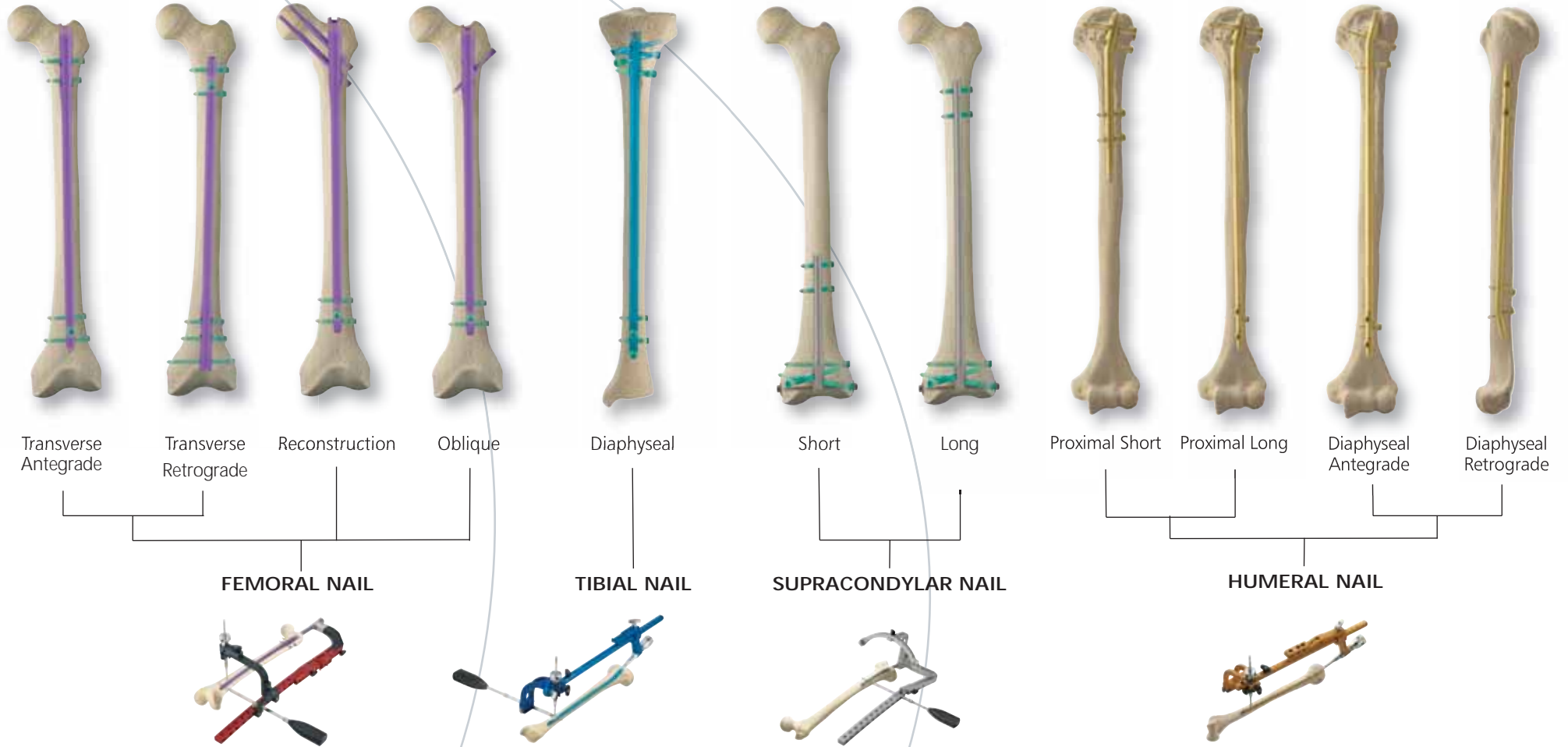
HUMERAL DIAPHYSEAL APPLICATION RETROGRADE**

• 46-Year-Old Male

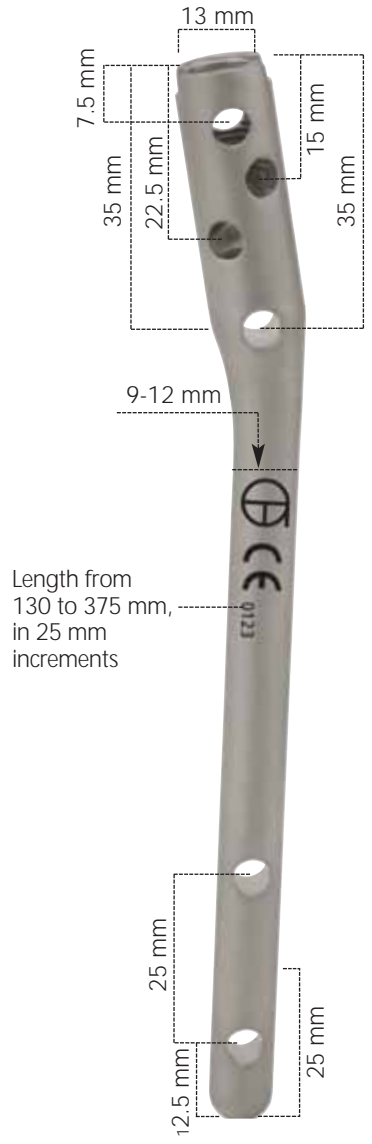


** Case study provided by Rinaldo Giancola, MD, Milan, Italy

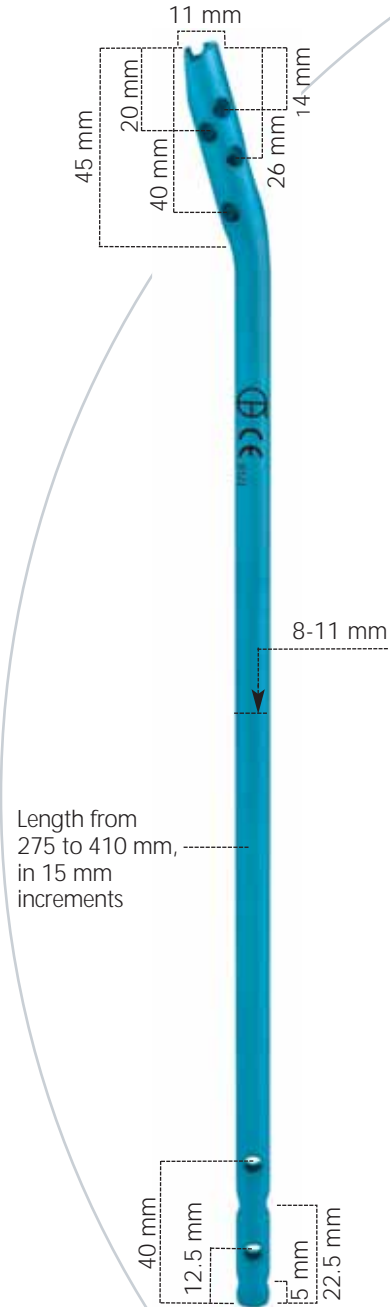




SUPRACONDYLAR NAIL



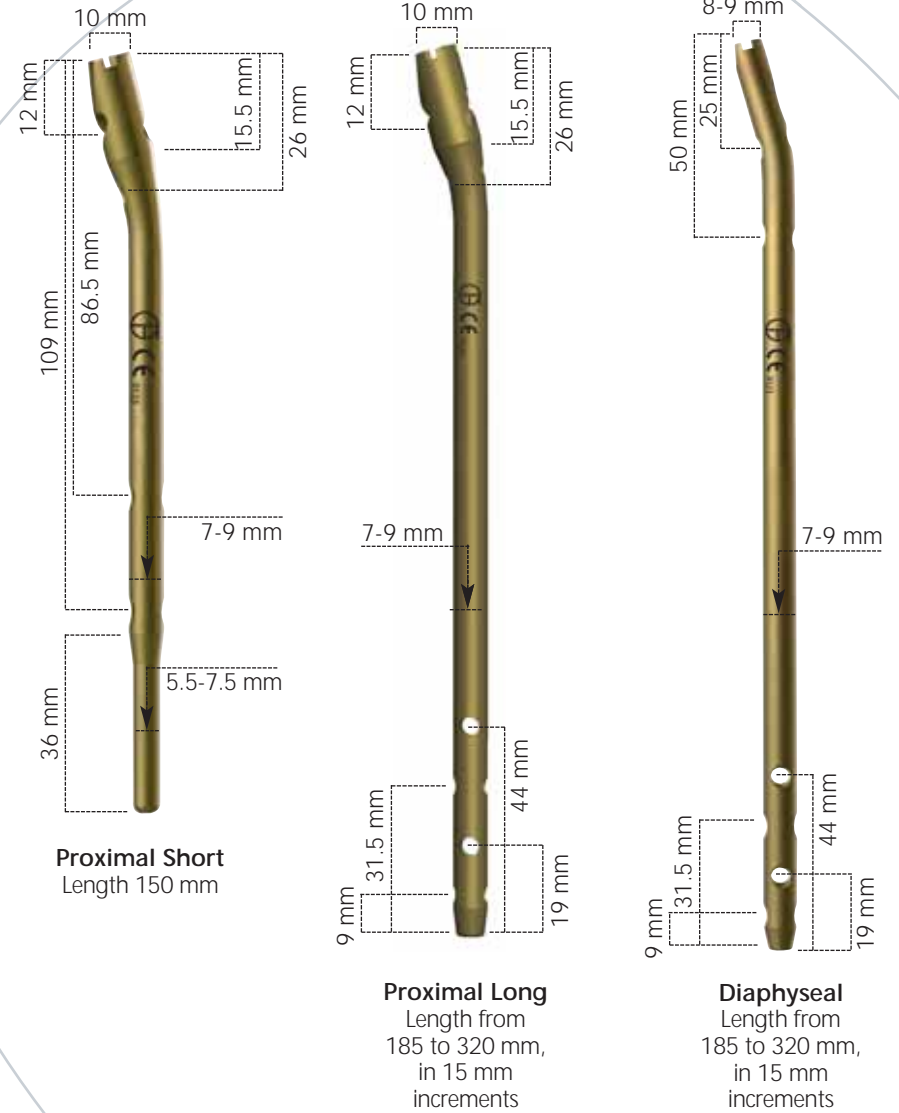
TIBIAL NAIL



FEMORAL NAIL

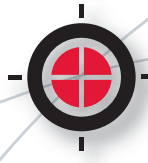


HUMERAL NAIL



OPTIMIZED INSTRUMENTATION REDUCES INVENTORY

- Universal, user-friendly instruments and colour coded nails, locking screws, end caps and instrumentation
- Screw thread diameters allow for better bone purchase
- Reverse threads on screw head for easy screw removal



TARGETING YOUR NEEDS



Standard Locking Screw



Humeral Locking Screw
Also for distal locking in 8 mm tibial nail



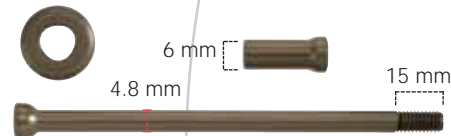
Recon/Oblique Locking Screw



Revision Locking Screw



Humeral Revision Locking Screw
Also for distal locking in 8 mm tibial nail



Condylar Compression Screw



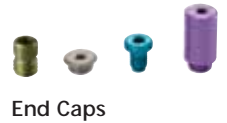
Fully Threaded Locking Screw



Fully Threaded Humeral Locking Screw
For proximal locking in humeral nail and in 8 mm tibial nail

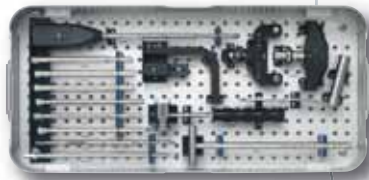


Titanium Proximal Threaded Locking Screws
(Not available in all markets)

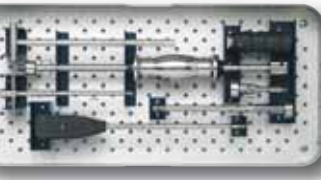


THE CENTRONAIL SYSTEM PROVIDES A COMPLETE NAILING SYSTEM IN ONLY SIX BOXES

4 nail specific boxes, 1 general instruments box and 1 extraction box



General Instruments Box



Extraction Instruments Box

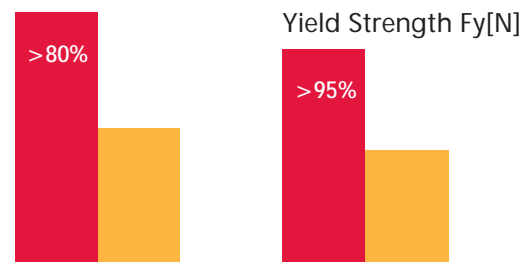
DESIGN OF THE ORTHOFIX LOCKING SCREW PROVIDES GREATER BIOMECHANICAL STRENGTH

- Reverse thread on screw head for easy screw removal
- Conical tip helps insertion
- Threaded portion of the locking screw provides strong fixation in proximal cortex
- Peg design provides increased fatigue resistance



CentroNail 4.8 mm Locking Screw Strength*

Stiffness K [N/mm]



■ CentroNail Locking Screw 4.8 mm

■ Major Competitor Threaded Locking Screw 5 mm

Strength Test performed according to ASTM 1264

* Orthofix Bench Testing,
Data on File, Orthofix Inc

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