

APEX FEMORAL NAILING SYSTEM

Why Choose the Apex Femoral Nailing System?

Exceptionally Engineered Multiple Locking options

The Apex Femoral Nailing System is fracture fixation reinvented. It is the only femoral nailing system which facilitates either micromotion or fully rigid locking. This enables screw trajectories and fixation biomechanics to be easily tailored to the fracture type and patient needs.

Micromotion locking has been demonstrated in the Apex Tibial Nail to have a positive impact on nonunion and delayed healing. These issues are also faced for femoral fractures as evidenced by:

- 11% real-world femoral shaft nonunion rate
- 25% femoral fractures not healed within 7 months

[1] Metsemakers et al., Injury, 2015



ANTEGRADE NAIL

Unique Axial Micromotion

Micromotion fixation creates a biomechanically optimal construct for secondary bone healing by promoting callus formation. This innovative approach to construct biomechanics is available only in the OrthoXel Apex nailing systems.

The meticulously designed and precision-engineered construct allows axial motion, enabled via a patented gliding insert in the nail stem, with industry-leading torsional stability. Up to two recon and one mediolateral orientation screw can be placed in the proximal femur with micromotion mode locking.

Ultimate Rigid Locking

Rigid locking is designed for clinical scenarios that demand enhanced stability and construct stiffness. A unique endcap engages the patented insert system to simultaneously lock all proximal screws, regardless of chosen orientation, generating ultimate rigidity.

Apex Mediolateral Screw

Compression and interlocking across the femoral neck can be achieved with the most proximally positioned mediolateral screw on the market.

Proximal Screw Anteversion

Variation of the proximal screw anteversion angles distributes fixation in the femoral head.



RETROGRADE NAIL



Unique Axial Micromotion

As with the antegrade nail, micromotion fixation in the retrograde nail creates a biomechanically optimal construct for secondary bone healing. The patented gliding insert system allows up to 1mm of controlled axial motion, while retaining enhanced torsional stability.



Ultimate Rigid Locking

Rigid locking is designed for clinical scenarios that demand enhanced stability and construct stiffness. A unique endcap engages the patented insert system to simultaneously lock all distal screws, regardless of chosen orientation, for ultimate rigidity.

Distal Interlocking

Multiplanar interlocking provides additional stability in the distal femur with simultaneous screws in oblique and mediolateral orientations to repair complex distal fractures.

INSTRUMENTATION FEATURES

- **Opening and Reaming Kit** is used with the Apex Femoral Antegrade & Retrograde Systems as well as the Apex Tibial System.
- **Femoral Antegrade Insertion Kit** is combined for both piriformis and greater trochanter femoral antegrade nail insertion.
- **Surgeon-designed** instrumentation systems
- **Unique retention driver** design holds screws connected to driver with a quick-release option once inserted.

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