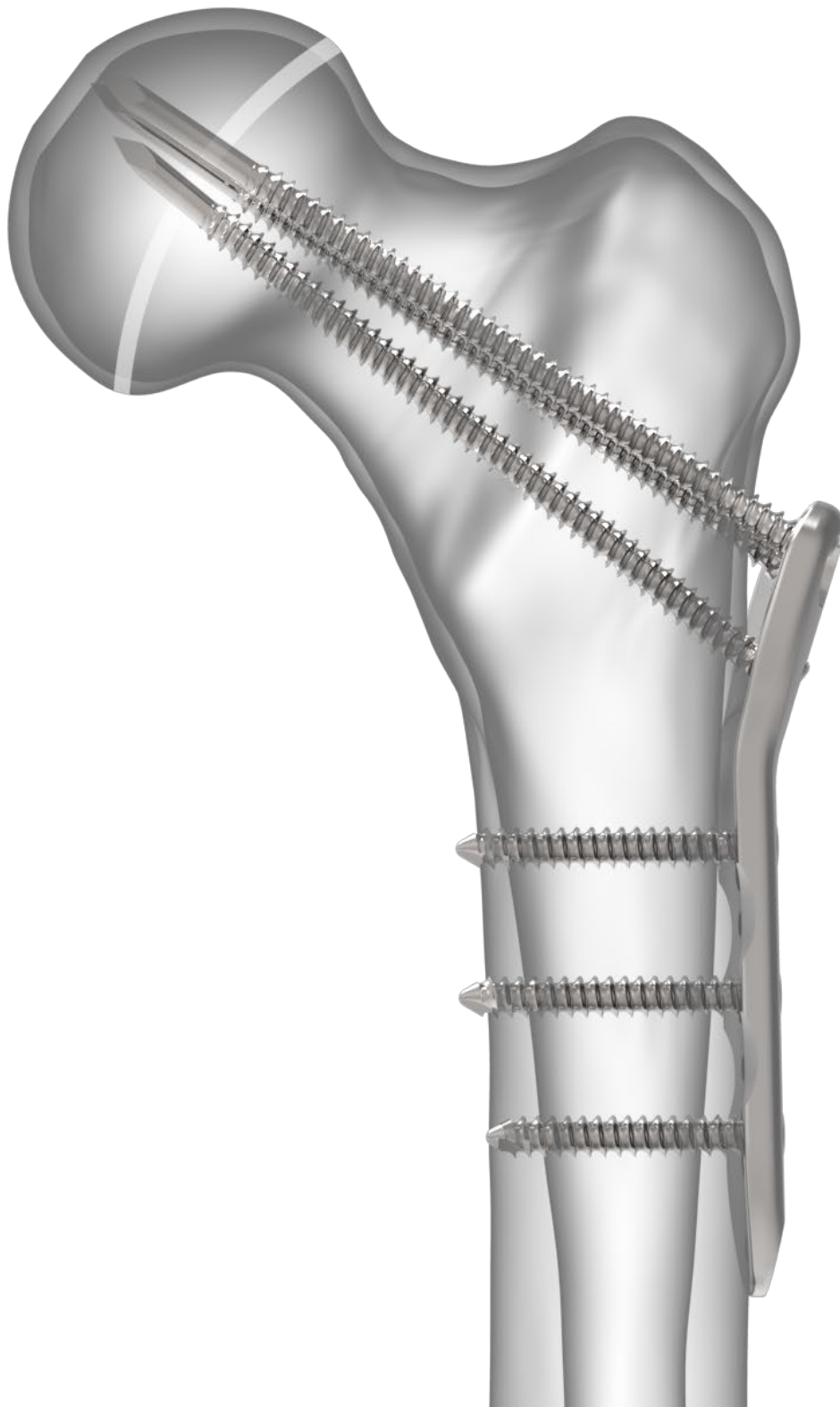


# Trans-Physeal Locking Screws

## Locking Proximal Femur System

SURGICAL TECHNIQUE





## Pre-Operative Planning

Measure the height of the capital epiphysis at multiple locations parallel to the femoral neck axis (dashed lines) in both the AP and lateral planes (represented by the red lines in Figure 1).

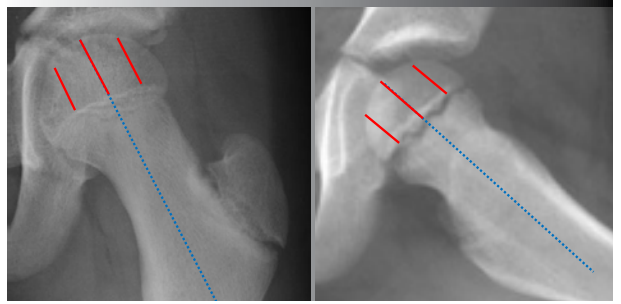


Figure 1

## Plate Positioning

Using the Precision Angle Wire Guide, place a 2.0 x 150mm guide wire at the appropriate angle for the chosen plate (Figure 2).

Confirm the position of the guide wire using fluoroscopy in both the AP and lateral planes.

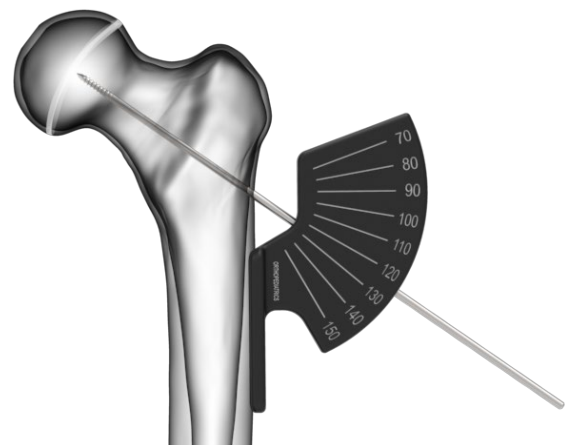


Figure 2

Attach the 1.6mm Threaded Wire Guides (towers) to the plate. Position the plate on the lateral cortex and secure to the femoral shaft with the bone clamp (Figure 3).



Figure 3

## X, Y, and Z Guide Wire Placement

With the plate secured to the femoral shaft, remove the initial 2.0mm guide wire and place three 1.6mm x 230mm guide wires through the X, Y, and Z towers. Advance the guide wires up to the physis (Figure 4).

**NOTE:** 2.5mm x 200mm guide wires can be used if excessive deflection is noted with the 1.6mm guide wires. Be sure to use the appropriate Threaded Wire Guides based on guide wire size.



Figure 4

## Measure for Thread Length

Using the Direct Measuring Device, measure each guide wire to determine the maximum thread length needed at each position: X, Y, and Z (Figure 5).

**NOTE:** The end of the Direct Measuring Device labeled “Use This Side With 2.5 Wire” can be used for either the 1.6mm or the 2.5mm guide wire with the tower still mated to the plate.



Figure 5

## Add Necessary Smooth Length

Using the measurements obtained pre-operatively, add the necessary smooth length to each thread length measured in Step 4 to determine the appropriate screw at each position, X, Y, and Z.

### Alternatively

In lieu of pre-operative measurements, screw size can be determined by advancing each guide wire to the desired depth across the physis (Figure 6) and measuring again with the Direct Measuring Device (Figure 7). The difference between the measurements obtained represents the necessary smooth length. Use fluoroscopy in the AP and lateral planes to ensure the wires have not entered the joint space.



Figure 6

**NOTE:** If advancing the wires across the physis, smooth wires may be preferred over threaded wires.

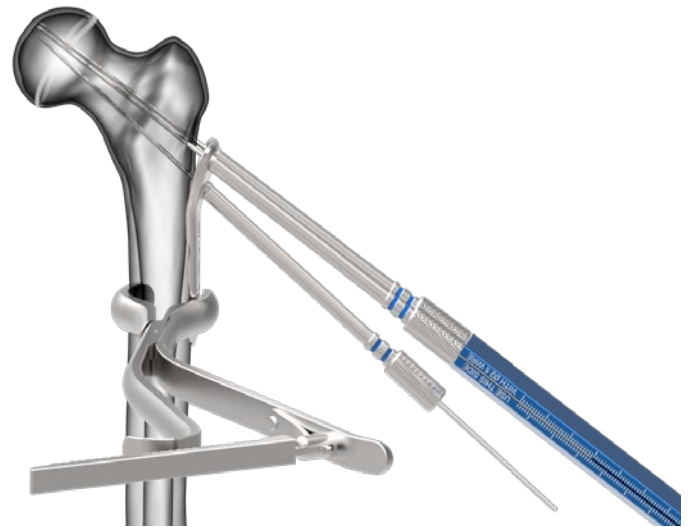


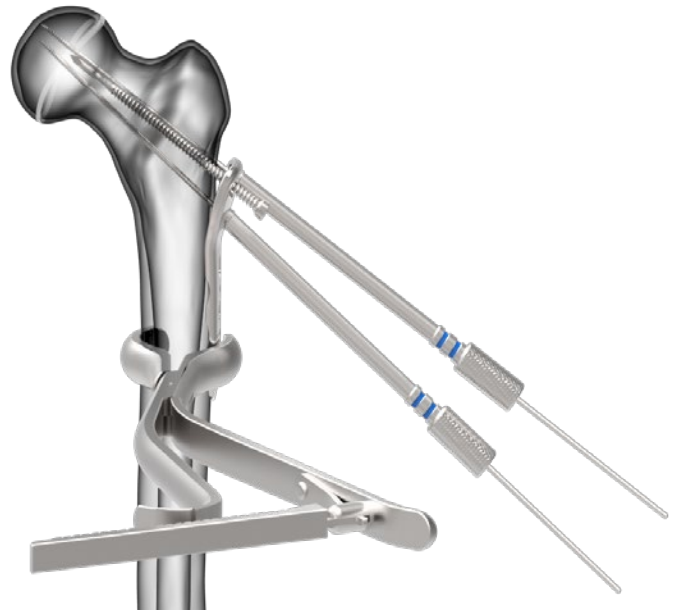
Figure 7

Position	Thread Length (from Step 4)	Smooth Length (determined pre-operatively or from dual wire measurements)	Screw Selected
X			
Y			
Z			

## Place Trans-Physeal Locking Screws

Working one screw position at a time, remove the threaded tower and guide wire and place the selected Trans-Physeal Locking Screw. Complete each position - X, Y, or Z - before moving on to the next one.

**NOTE:** With the 1.6mm guide wires, It may be necessary to the open the lateral cortex with the cannulated drill bit in dense bone.



Refer to ST-0907-01-00 for diaphyseal screw placement technique.

## PRODUCT INFORMATION

### TRANS-PHYSEAL LOCKING SCREWS

Item Number	Qty	Description
00-0903-3840	6	3.5mm x 40mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3842	6	3.5mm x 42mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3844	6	3.5mm x 44mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3846	6	3.5mm x 46mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3848	6	3.5mm x 48mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3850	6	3.5mm x 50mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3852	6	3.5mm x 52mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3854	6	3.5mm x 54mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3856	6	3.5mm x 56mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3858	6	3.5mm x 58mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3860	6	3.5mm x 60mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3862	6	3.5mm x 62mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3864	6	3.5mm x 64mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3866	6	3.5mm x 66mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3868	6	3.5mm x 68mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3870	6	3.5mm x 70mm Trans-Physeal Locking Screw, T15, 10mm Unthreaded Tip
00-0903-3940	6	3.5mm x 40mm Trans-Physeal Locking Screw, T15, 15mm Unthreaded Tip
00-0903-3942	6	3.5mm x 42mm Trans-Physeal Locking Screw, T15, 15mm Unthreaded Tip
00-0903-3944	6	3.5mm x 44mm Trans-Physeal Locking Screw, T15, 15mm Unthreaded Tip
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00-0903-3970	6	3.5mm x 70mm Trans-Physeal Locking Screw, T15, 15mm Unthreaded Tip

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**CAUTION:** Devices are supplied Non-Sterile. Clean and sterilize before use according to instructions.

**CAUTION:** Implants components are single-use. Do not reuse.

**CAUTION:** The device is not approved for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

**CAUTION:** Only those instruments and implants contained within this system are recommended for use with this technique. Other instruments or implants used in combination or in place of those contained within this system is not recommended.

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2850 Frontier Drive | Warsaw, IN 46582  
ph: 574.268.6379 or 877.268.6339 | fax: 574.268.6302  
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