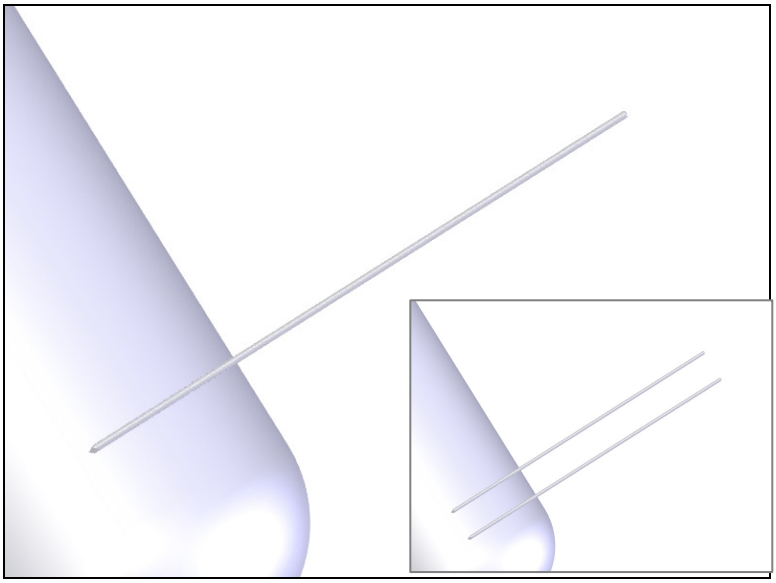
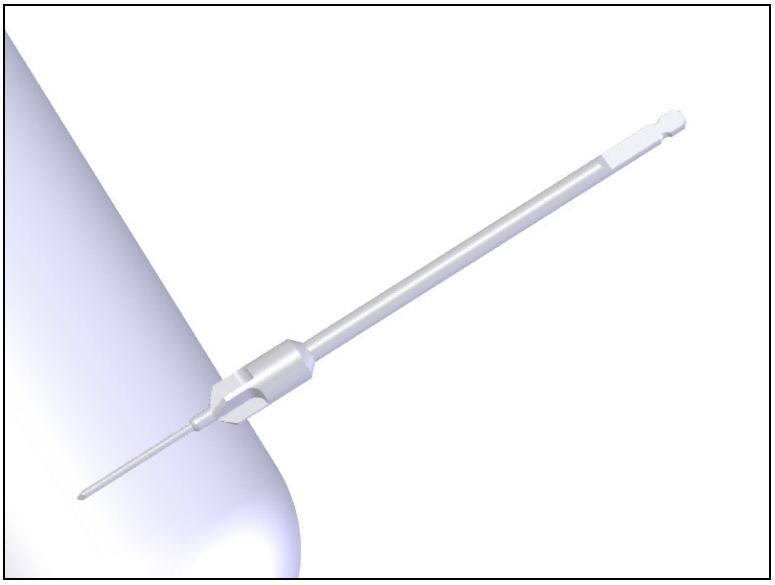
SURGICAL TECHNIQUE FOR ActivaScrew™ Cannulated

1. Insert guide wire through the drill sleeve to appropriate depth under image intensification.

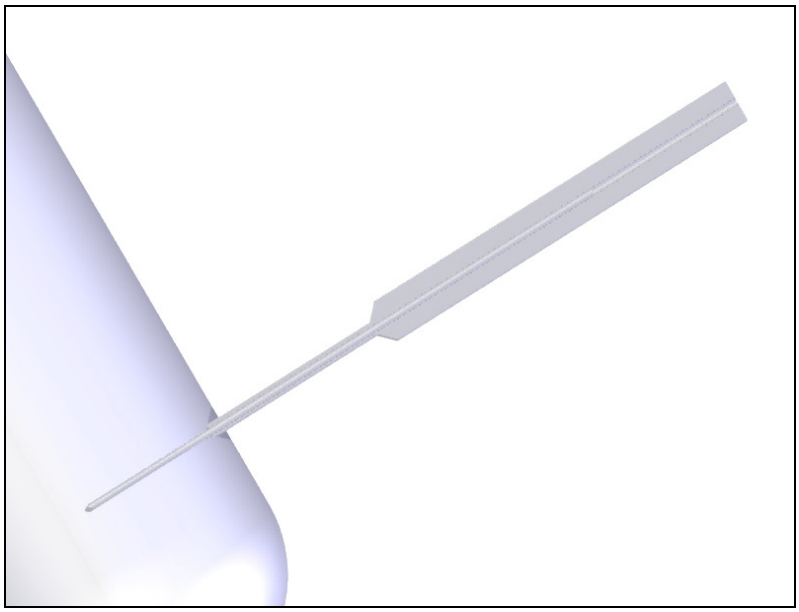
   Optional Technique: Insert additional guide wire for extra stabilization and guidance.



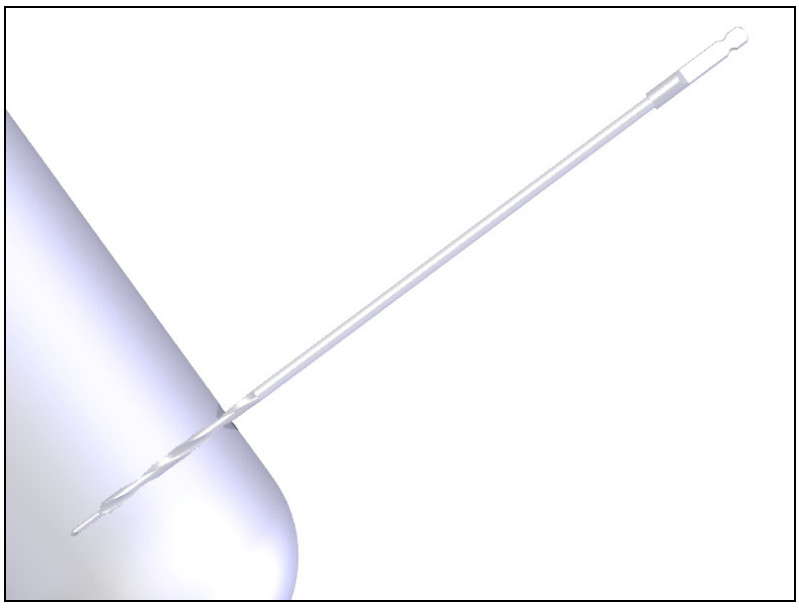
2. Countersink (optional). In areas where soft tissue coverage is minimal, and when the head of the fully threaded screw is needed as additional support, the appropriate countersink can be used in order to make space for the screw head and to avoid soft tissue irritation by the protruding screw head. Use appropriate cannulated countersink without drill sleeve.



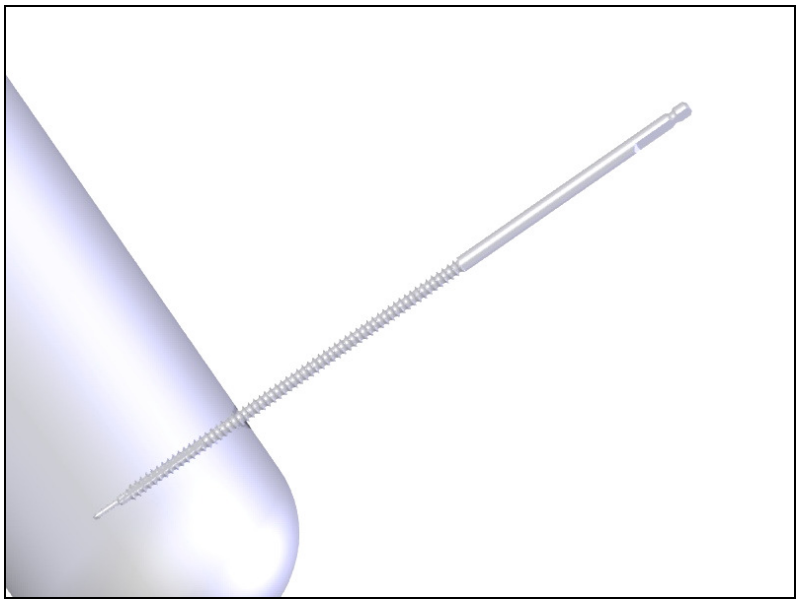
3. Measure the screw length by sliding the tapered end of the cannulated depth gauge along the guide wire to the bone surface. If countersink has been used, the measuring device must be placed at the bottom of the countersink. Read the scale at the end of the guide wire to determine appropriate screw length. This reading will place the screw 5 mm short of the guide wire tip to maintain the stabilization effect of the guide wire throughout the procedure.



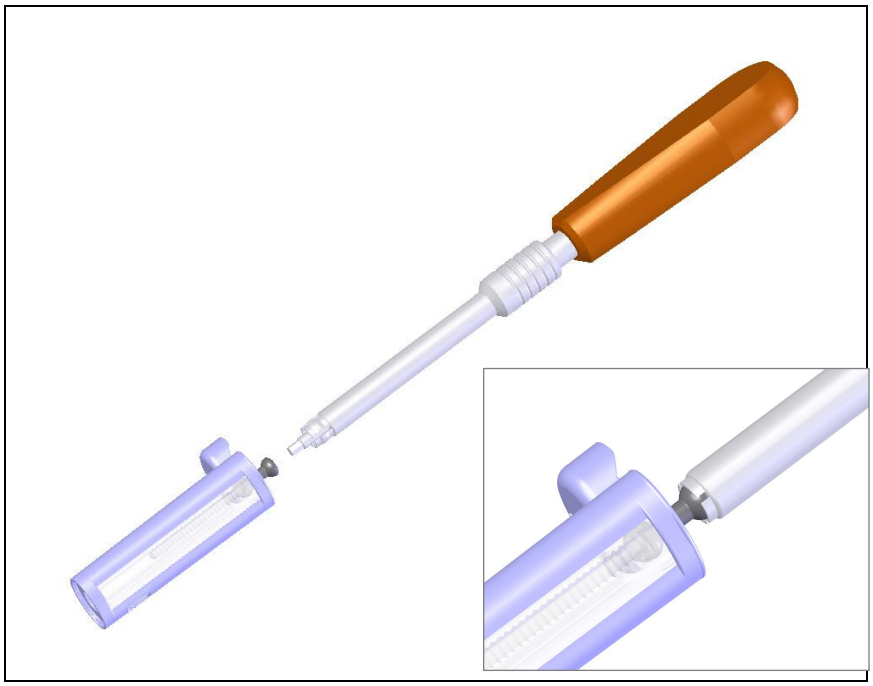
4. Select the appropriate ActivaScrew™ Cannulated for the indication.
5. Drill the screw hole through the drill sleeve to a sufficient depth under image intensification (not including the last 5mm of the guide wire) using an appropriate cannulated drill bit. Use irrigation.



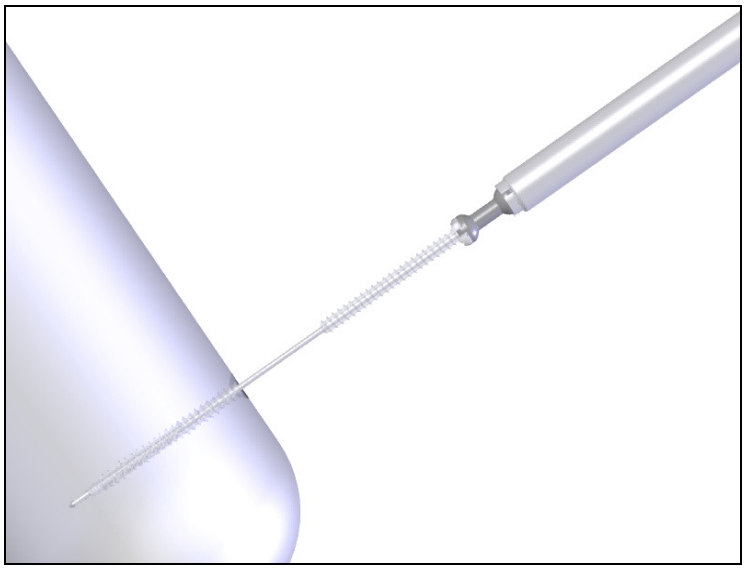
6. Tap the screw hole manually through the drill sleeve to a sufficient depth using an appropriate cannulated bone tap. Make sure to tap the drill canal all the way.



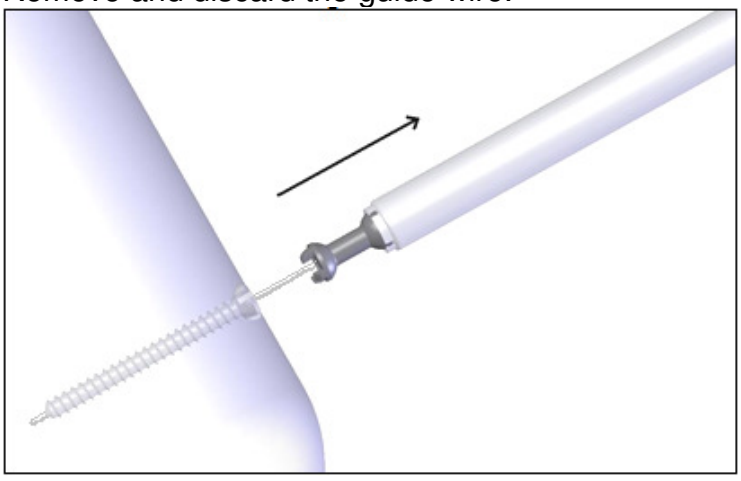
7. The prepared hole should be irrigated prior to screw insertion to flush out bone debris.
8. Open ActivaScrew™ HOLDER cap.
9. Pick the screw out of the ActivaScrew™ HOLDER by appropriate cannulated screwdriver



10. Insert the screw along the guide wire fully into the drill hole.
    - NOTE: When the reduction is good and drilling and tapping are done properly, the insertion should be easy with two finger technique. In case the friction increases too much during insertion, screw must be removed and the hole must be rinsed and/or retapped.

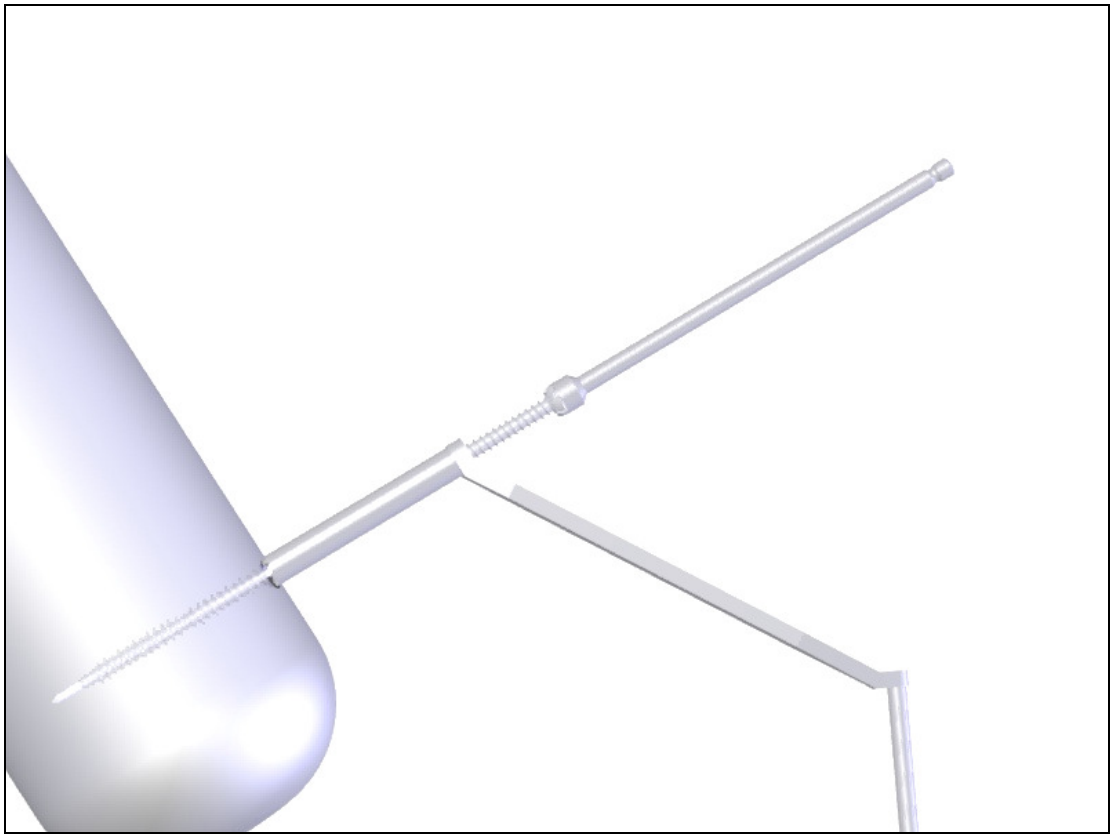


11. After the screw is fully inserted, the INSERTION ADAPTER must be detached from the screw (e.g. by **pulling** with the screw driver or with pliers. **Do not bend the adapter** loose while the K-wire runs through, it will damage the K-wire). After this the INSERTION ADAPTER is to be disposed.
12. Remove and discard the guide wire.



13. After insertion in cases where the screw head is not needed (e.g. syndesmosis screw), the screw is cut along the bone or plate surface after insertion to avoid soft tissue irritation by the protruding screw head. Scissors, reciprocating saw or a hot wire can be used to cut the ActivaScrew™ Cannulated. DO NOT cut the head of a LAG-screw.

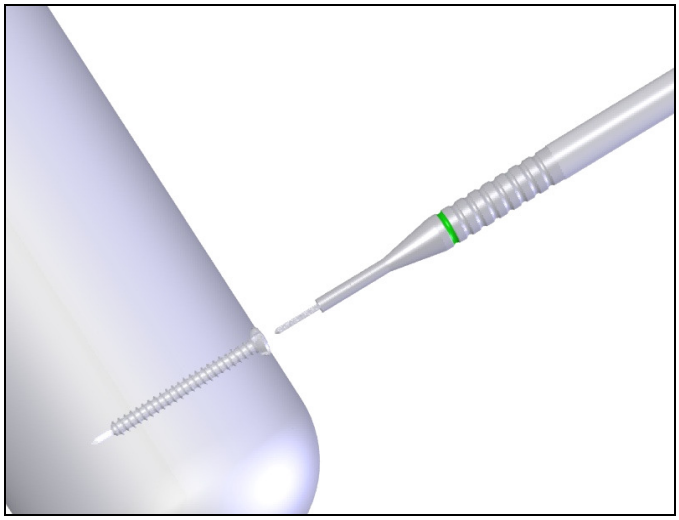
Optional Technique for steps 1-13: In areas where soft tissue coverage is more than 20mm, protection sleeve can be inserted through a small incision and all the steps can be done through the sleeve to prevent soft tissue damage. In step 9 the surgeon must remove the insertion adapter from screw before the insertion and insert the screw with customised direct driver through the protection sleeve. Remove the guide wire after insertion.



14. On the basis of surgeon's decision radiographs are taken before wound closure.
15. After fixation, the wound is closed in layers applying standard principles of orthopaedics and traumatology.
16. Meticulous hemostasis and complete primary skin closure over the implant are essential.

Optional Technique with the ActivaPin™: In cases where more shear strength of the implant is prefered on the basis of surgeon's decision, it is possible to increase strength of the 4.0 mm and 4.5 mm ActivaScrew™ Cannulated by inserting 1.5mm ActivaPin™ implant inside the cannulated screw with e.g. ActivaPin™ applicator. This technique also allows to fill the distal end of the guidewire hole and to give more stabilization into the fixation. **3.5 mm ActivaScrew™ Cannulated can NOT be used with ActivaPin™**

Step A: Select appropriate length of the 1.5mm ActivaPin™ implant and insert pin inside the ActivaScrew™ Cannulated with customised ActivaPin™ instrumentation according the normal insertion technique of the ActivaPin™.



Step B: Insert ActivaPin™ fully into the hole to reach the distal end of the guidewire hole with the grooved pin. Detach the Instrument from the pin. After insertion in cases pin is too long proximal head of the pin is cut (e.g. with Hot Wire) into the specific length and along the screw head to avoid soft tissue irritation by the protruding head.