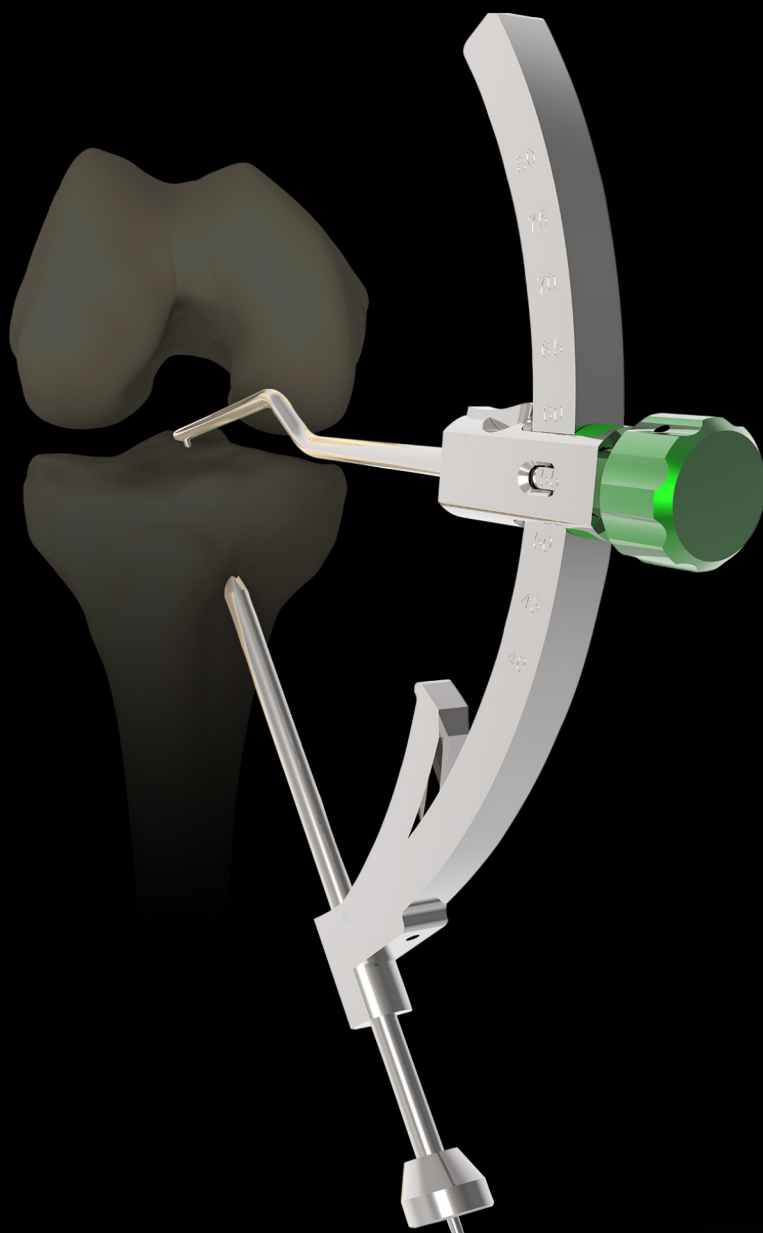
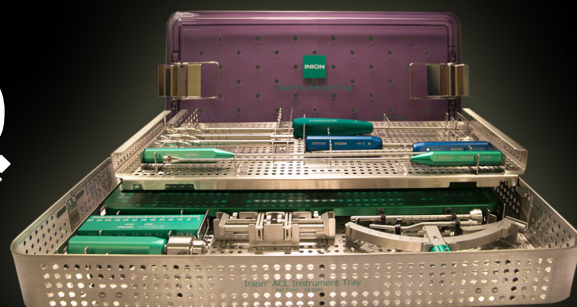


راهنمای کاربردی ست جراحی ACL



پزشکی تب دائم



TebDaem.Com

Introduction

The Inion® ACL instrument set is a compact and easy-to-use system for ACL reconstruction. The system combines the instruments and the Graft preparation station in one autoclavable case.

The Inion® ACL instrument set offers instruments required for both interference screw and button-type of fixation.

1. Graft preparation

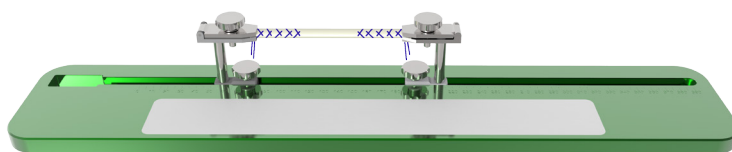


1.1 Harvest the semitendinosus and gracilis tendons using the Tendon stripper (INS-9335).



1.2 Residual muscle is removed on a plastic cutting board.

1.3 Assemble 2 soft tissue clamps (INS-9352) and the Graft preparation station base (INS-9351) together.

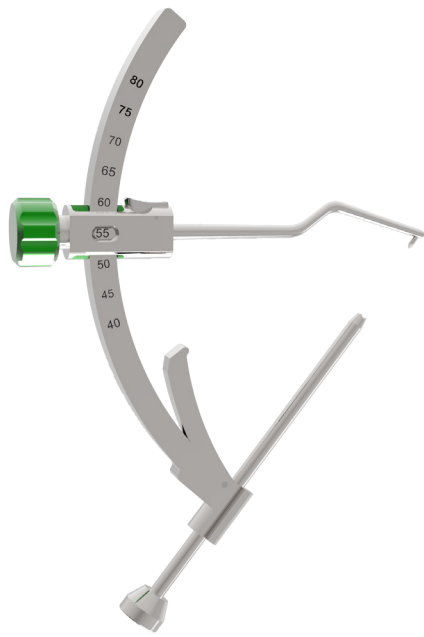


1.4 Suture both ends of the graft, typically for around 30 mm. Make sure the graft is in good tension by adjusting the clamp. Graft should be covered by a moist sponge.

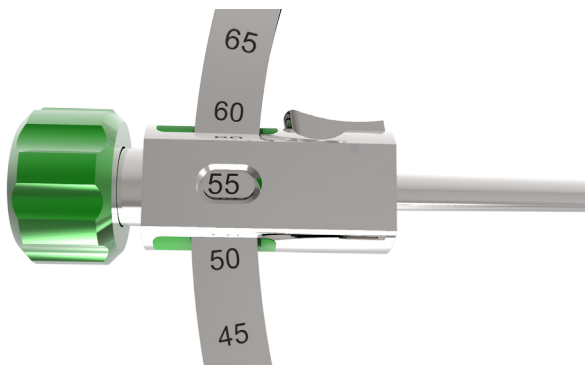


1.5 Measure the graft diameter by using the Graft sizer (INS-9341). The graft should moderately pass through the hole, not too tightly nor too loosely.

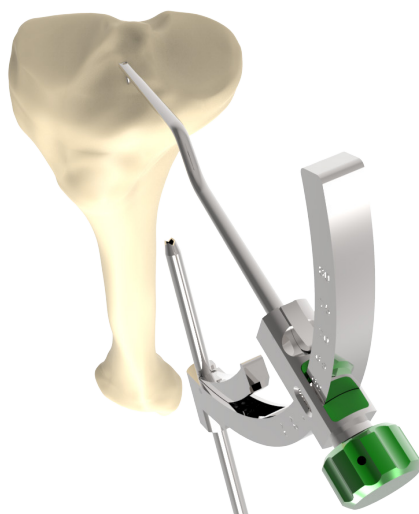
2. Drilling tibial tunnel



2.1 Assemble the Drill guide pin sleeve (INS-9332), Tibial pin marking hook (INS-9333) and Drill guide arm (INS-9331).

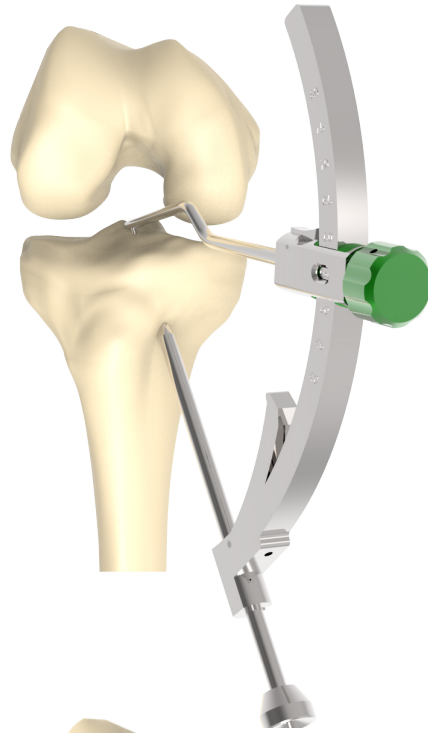


2.2 Adjust the Tibial pin marking hook to the position of 55°.



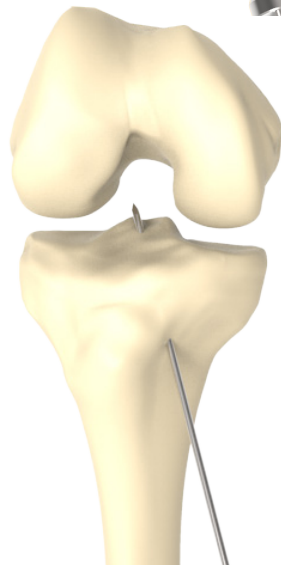
2.3 Place the tip of the Tibial pin marking hook in the center of ACL footprint.

2. Drilling tibial tunnel

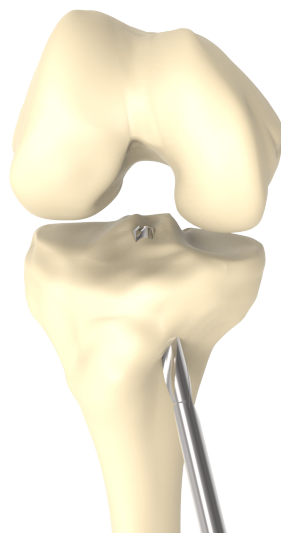


2.4 Push the Drill guide pin sleeve to the bone surface and fix the position. Use the Drill guide pin w/o eyelet (INS-9336) and drill through the tibia, monitor the drill pin tip not to damage the femoral cartilage.

To achieve a longer tibial tunnel, increase the angle of the Drill guide arm.

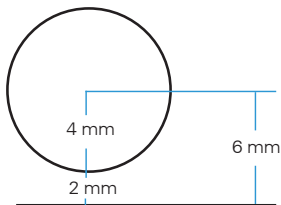
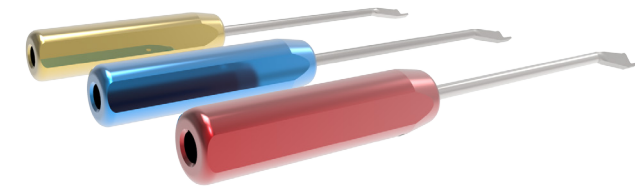


2.5 Disassemble the tibial drill guide, only the Drill guide pin is left in place.



2.6 Drill the tibial tunnel using the corresponding Cannulated drill bit (INS-9301–9305) that matches the graft diameter.

3. Drilling femoral tunnel



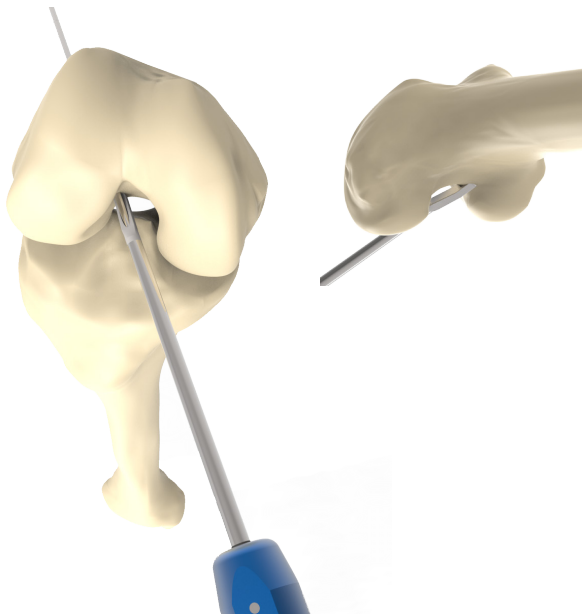
*E.g. Femoral tunnel is 8 mm,
Femoral drill guide = 4 + 2 = 6 mm*

3.1 Choose the right size of the femoral guide.

Inion® provides various Femoral drill guides with different offsets (5/6/7 mm) (INS-9321–9323).

Always ensure that enough posterior cortex (at least 2 mm) remains.

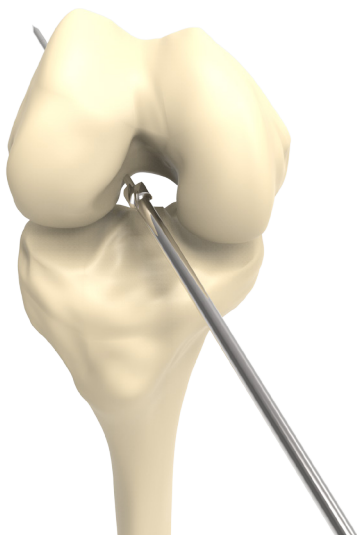
Femoral drill guide size = Radius of the tunnel + 2 mm posterior cortex.



3.2 Place the hook of the Femoral drill guide at the over-the-top position, in direct contact with the bony cortex.

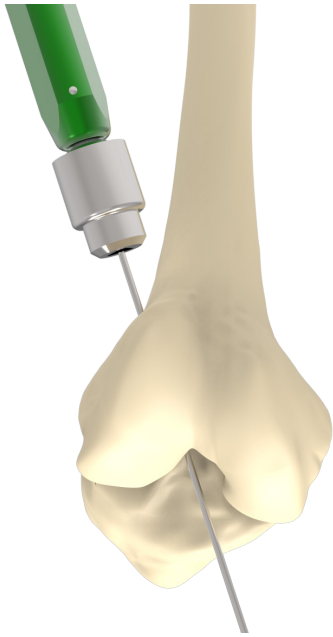
Different techniques can be used, e.g. transtibial or medial portal techniques. Ideal position is the footprint of ACL, or use 10–11 o'clock in the right knee or 1–2 o'clock in the left knee as the reference.

3.3 Use the Drill guide pin w/ eyelet (INS-9337) to drill through the femur.

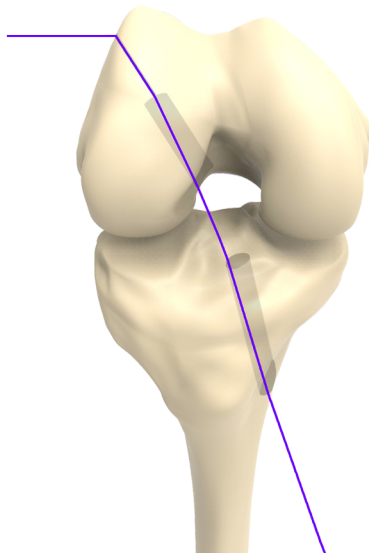


3.4 Choose the corresponding size of the Cannulated headed reamer (INS-9306–9310) to create the femoral tunnel, typically 25 mm to 30 mm.

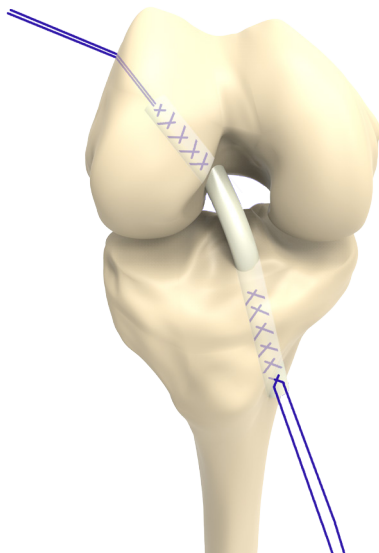
4. Introducing the graft



4.1 Tighten the Jacobs chuck handle (INS-9339) in the tip of the Drill guide pin. Pass a suture through the eyelet of the Drill guide pin (INS-9337).

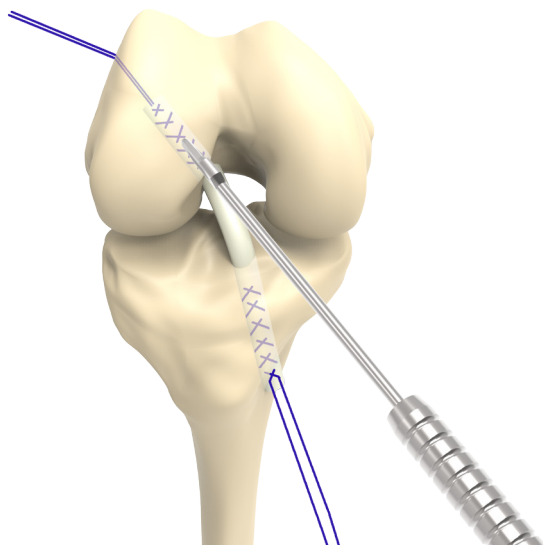


4.2 Pull the Drill guide pin with the Jacobs chuck handle through the femoral tunnel, pass one end of the suture out of the knee joint via femoral tunnel and leave another end of the suture in the knee joint. Then pull out the end of the suture, which is left in the knee joint, through tibial tunnel.

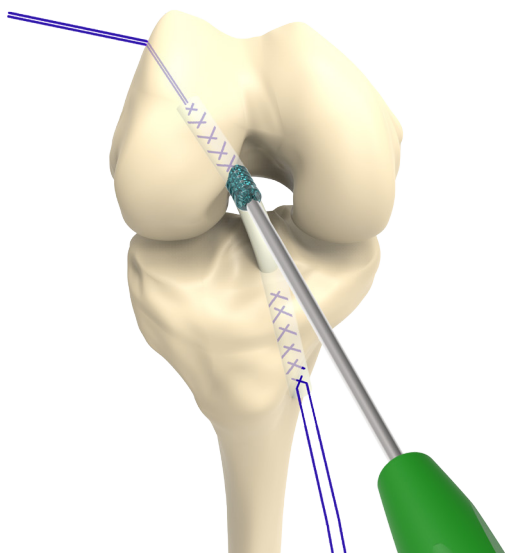


4.3 Introduce one end of the graft into femoral tunnel properly. Then another end of the graft is left in the tibial tunnel.

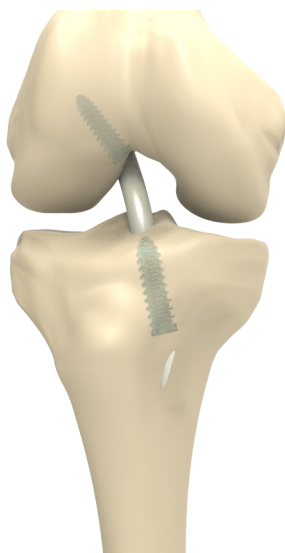
5. Inserting the interference screws



- 5.1 Before screw insertion, the tunnel entrance is notched with the cannulated Inion Hexalon™ RapidNotcher (INS-9207). It is important to properly notch the bone tunnel entrance before screw insertion in order to:
- avoid difficulties with screw insertion
 - reduce risk of screw breakage



- 5.2 Insert the Inion Hexalon™ screw with the cannulated Inion Hexalon™ screwdriver (INS-9200) over the guide wire to femoral side. Screw diameter is usually same as the graft diameter, and length 25 mm. Insert the screwdriver tip all the way down to the bottom of the screw socket before screw insertion. Align the guide wire, screwdriver and the screw parallel to the long axis of the bone tunnel before screw insertion.



- 5.3 Insert the Inion Hexalon™ screw with the cannulated screwdriver over the guide wire to tibial side. Screw diameter is usually same or one size larger than the graft diameter, and length 30 mm. Insert the screw up to the tibial plateau, but ensure that the screw tip remains completely inside the bone.
- 5.4 Cut the remaining part of the graft outside of the tibial tunnel.