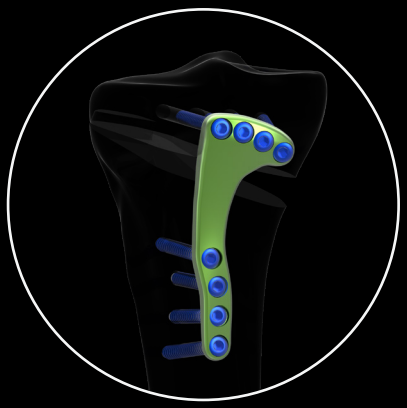
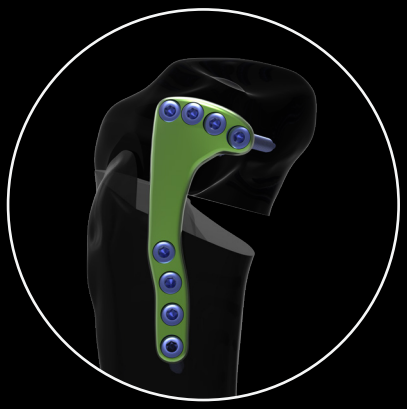
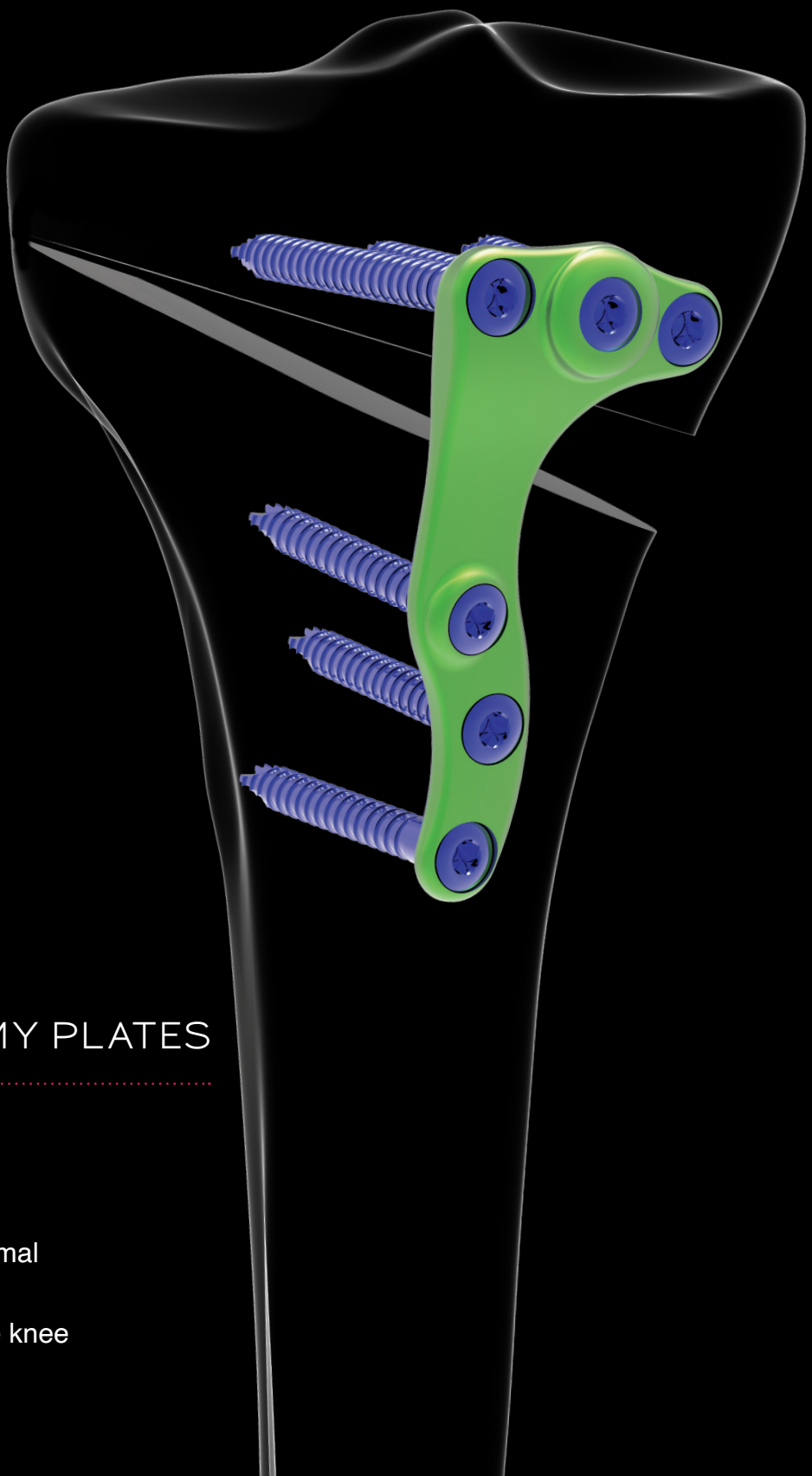
NEWCLIP-TECHNICS

INNOVATION MEANS MOTION







ACTIVMOTION
HIGH TIBIAL OSTEOTOMY PLATES

POLYAXIAL LOCKING SYSTEM
DUALTEC SYSTEM®

- Anatomically contoured implant: proximal curvature and metaphyseal slope.
- Design and positioning adapted to the knee biomechanics.

ACTIVMOTION

Indications: The ACTIVMOTION range is intended for knee osteotomy in adults

Contraindications:

- Serious vascular deterioration, bone devitalization.
- Pregnancy.
- Acute or chronic local or systemic infections.
- Lack of musculo-cutaneous cover, severe vascular deficiency affecting the concerned area.
- Insufficient bone quality preventing a good fixation of the implants into the bone.
- Muscular deficit, neurological deficiency or behavioural disorders, which could submit the implant to abnormal mechanical strains.
- Allergy to one of the materials used or sensitivity to foreign bodies.
- Serious problems of non-compliance, mental or neurological disorders, failure to follow post-operative care recommendations.
- Unstable physical and/or mental condition.

HIGH TIBIAL OSTEOTOMY PLATES

→ TECHNICAL FEATURES

- **Anatomic asymmetrical implant** (green anodized for right plate and blue anodized for left plate)
- Proximal curve
- Metaphyseal slope adapted to the anatomy
- Material: **Titanium** alloy TA6V

ATGP1 ATDP1

Size 1

ATGP2 ATDP2

Size 2

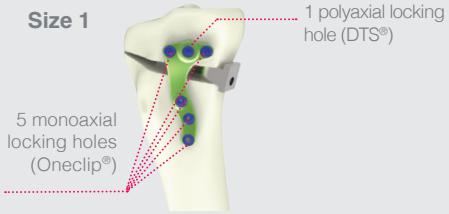
FIXATION

→ TECHNICAL FEATURES

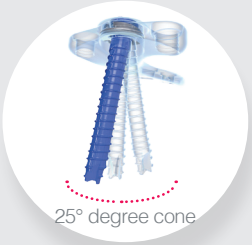
- Ø4.5 mm reinforced core screws for optimized mechanical stability,
- Buried screws are used to minimize risks of soft tissue irritation.

→ POLYAXIAL LOCKING SYSTEM

Size 1

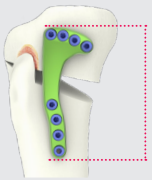


Possible angulation of the screw before locking (25° locking range) thanks to the DTS® system.



→ SELF LOCKING SYSTEM

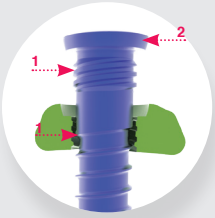
Size 2



8 monoaxial locking holes (Oneclip®) for an optimized stability.

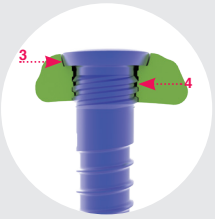
Features:

- The threaded sections under the screw head and inside the hole have the **same characteristics** (1):
  - Cylindrical internal thread profile,
  - Cylindrical external thread profile,
- Screw head cap (2),
- Plate and screw made from the same material: titanium alloy



Results:

- **Low profile construct:**
  - The screw is stopped in the hole by its cap, insuring the locking (3),
  - The screw is locked when the head is flush with the plate.



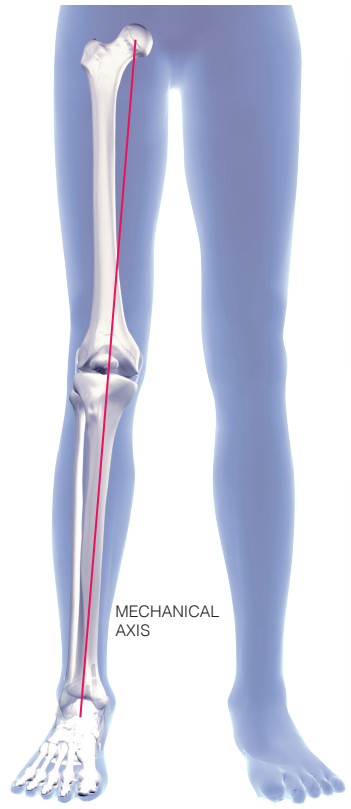
Coaptation of both profiles when locking (4).

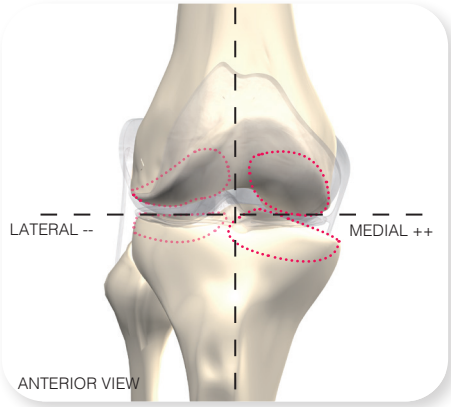
INSTRUMENTATION

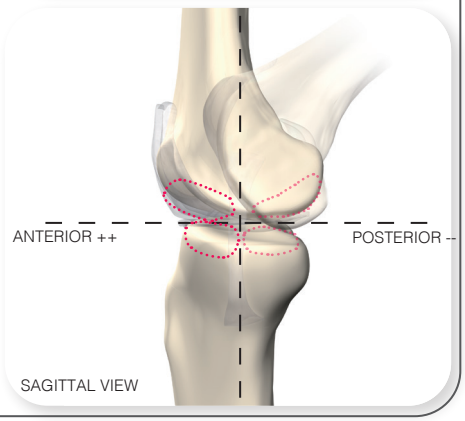
- A single instrument set for the whole ACTIVMOTION range,
- One type of screw (Ø4.5 mm) and one drill bit diameter (Ø4.0 mm) for simple and safe implant fitting,
- Osteotomy metallic wedges for progressive and safe opening of the osteotomy site.

BIOMECHANICS OF THE KNEE

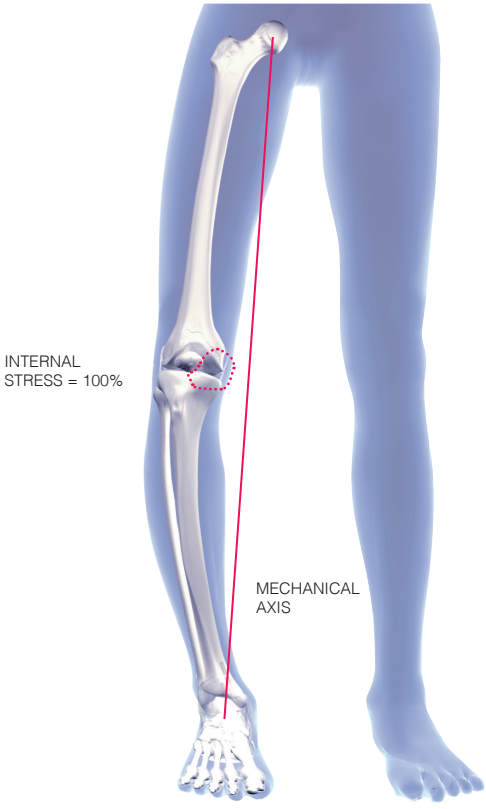
NORMAL KNEE ALIGNMENT



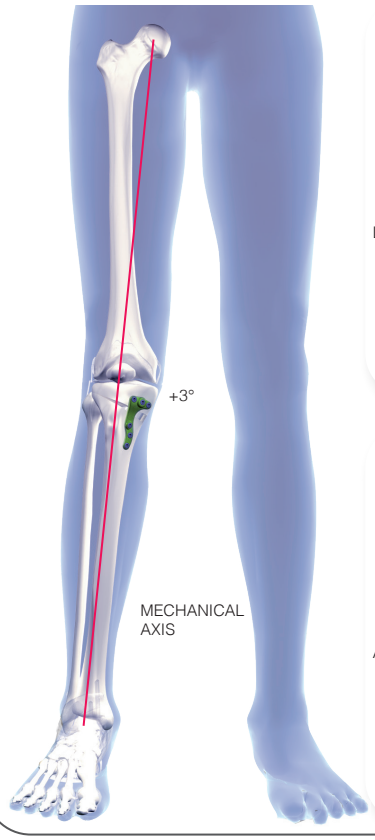


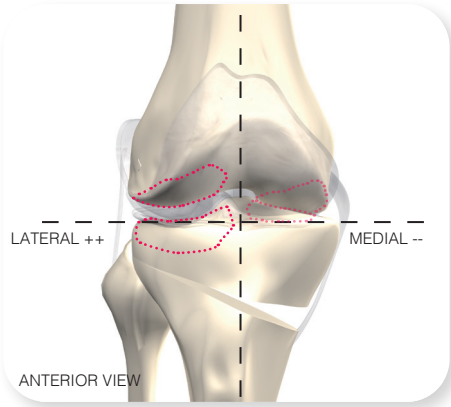


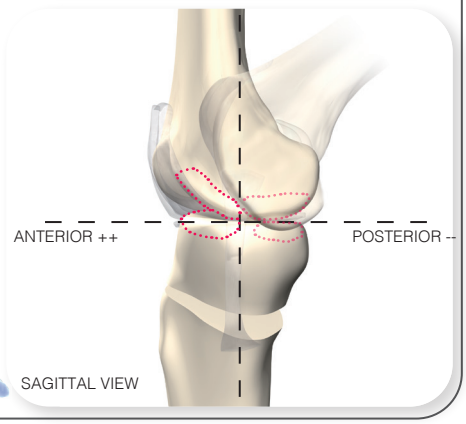
GENU VARUM

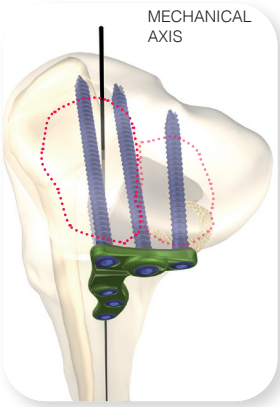


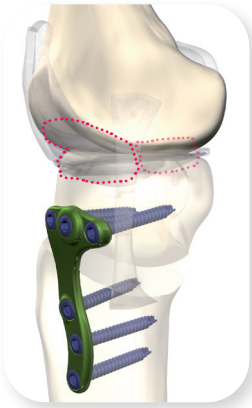
KNEE AFTER +3° VALGISATION CORRECTION











OPTIMIZED IMPLANT POSITIONING

- The implant is fitted onto the antero-medial surface of the tibia where the highest mechanical stresses are registered.
- For Size 1, screws are distributed following a 2 + 1 pattern:
  - 2 screws on the lateral tibial plateau
  - 1 screw on the medial tibial plateau
  - 3 screws on the diaphysis
- For Size 2, screws are distributed as following:
  - 4 screws on the tibial plateau
  - 4 screws on the diaphysis
- Orientation of the screws in an antero-posterior direction allows for an increased resistance to mechanical stress when the knee rolls back.

higher stress distribution
lower stress distribution

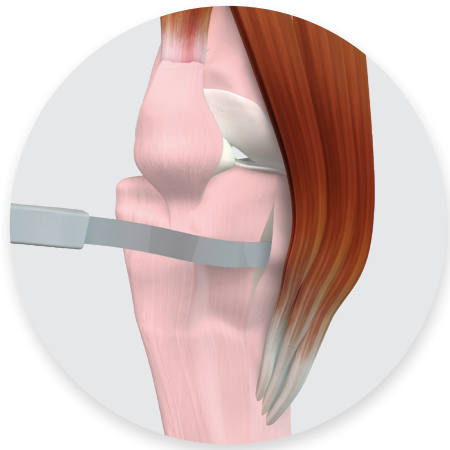
SURGICAL TECHNIQUE

Use an antero-medial approach to expose the proximal tibia metaphysis. Techniques presented below are one of the possible surgical techniques. The choice is made according to surgeon's preferences.

SURGICAL APPROACH

1. The patient is positioned supine on the operating table. The procedure is performed under pneumatic tourniquet and a small pillow is placed under the buttock of the operated side in order to maintain the limb in neutral rotation.

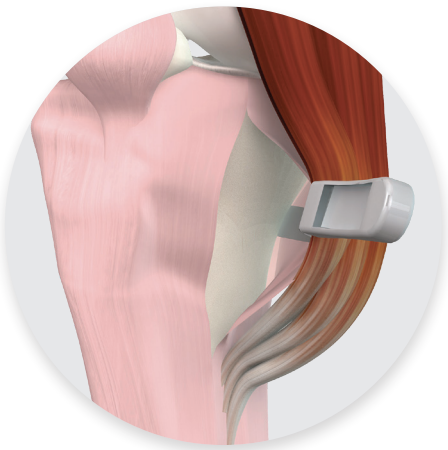
2. An 8 cm slightly oblique vertical incision is made along the antero-medial surface, running over the joint space down to under the tibial tuberosity.



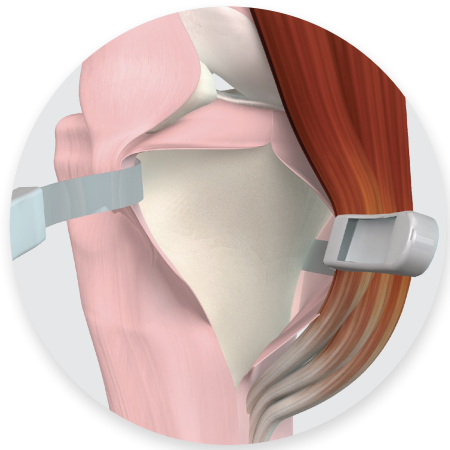
3. A single-plane incision is made through the periosteum; then the hamstring and the medial collateral ligament (MCL) are retracted posteriorly.

   The larger the angular correction must be, the more the hamstring and MCL should be released distally.

CAUTION : if the release is adequate, the opening of the osteotomy and the insertion of the bone graft can be performed with no risk of tearing the lateral cortical hinge. If it is not, forcing the graft in may tear the hinge, thus seriously jeopardizing complete bone healing.
ie: pseudarthrosis.



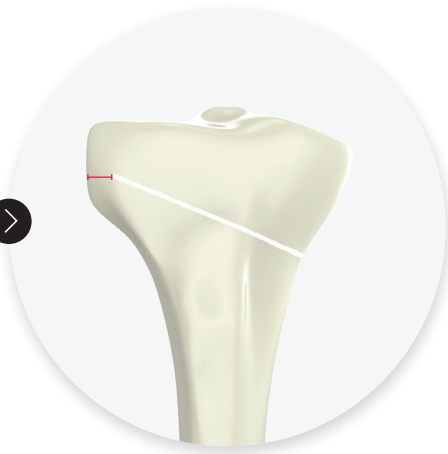
4. An elevator is placed very carefully over the posterior surface of the tibial metaphysis and should remain in place as a protection during the osteotomy.



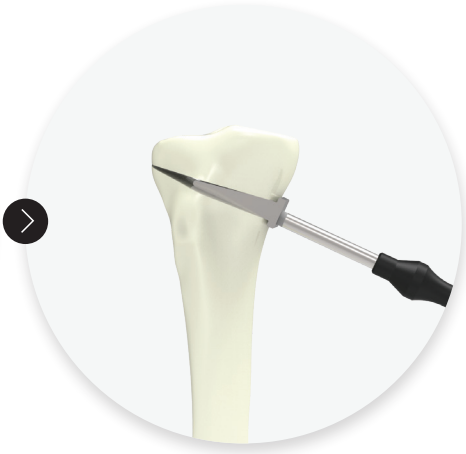
5. Clear the deepest part of the patellar tendon down to its attachment onto the tibial tuberosity, and protect it using a retractor during the osteotomy.

HIGH TIBIAL OSTEOTOMY - MONOPLANAR CUT

1. To perform the osteotomy cut, insert:
   - **The first pin** from the insertion of the hamstring until reaching the lateral cortex, 15 mm below the tibial plateau ridge.
   - **The second pin** parallel to the first one with 20 mm distance, to maintain the tibial slope.

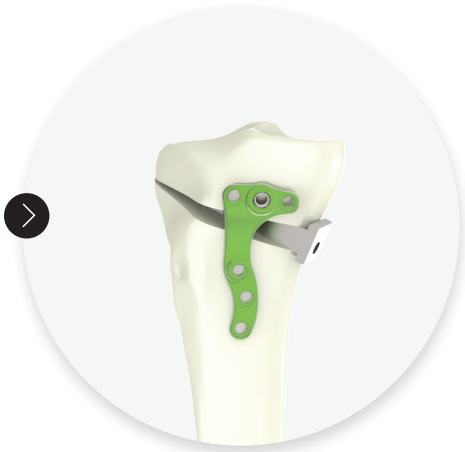


2. Incise upward toward the head of the fibula and stop the cut 10 mm before the lateral cortical area. Then, remove the pins.

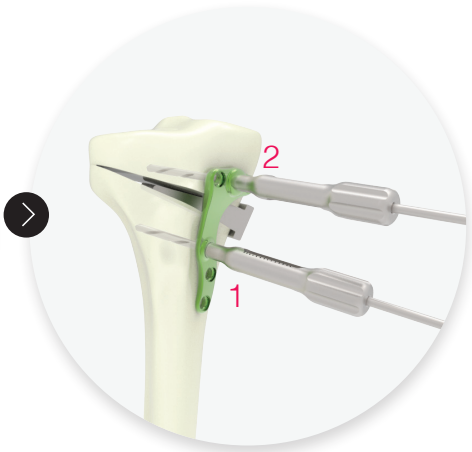


3. Insert wedges of increasing sizes until finding the appropriate one (6 -16 mm) while maintaining the lateral surface of the tibia. Once the appropriate wedge is inserted, the angular correction is maintained during osteosynthesis.

   Alternatively, the Meary pliers can be used to increase the size of the opening.



4. Position the plate onto the antero-internal side so that:
   - The proximal part of the plate runs parallel to the osteotomy cut, or
   - The distal part of the plate runs parallel to the tibial tuberosity.



5. Lock the first Ø4.0 mm guide (ANC212) in the hole under the osteotomy cut, then start drilling using a Ø4.0 mm drill (ANC211)(1).
   Insert a second Ø4.0 mm guide into the polyaxial hole (2) of the plate. Adjust the drilling direction towards the lateral tibial plateau and drill. The screw length can be directly read on the drill at the rear of the drill guide or thanks to the length gauge (ANC210).
   Remove the drill guides. Insert and lock the 2 appropriate screws. The final tightening of the screws must be performed by hand.

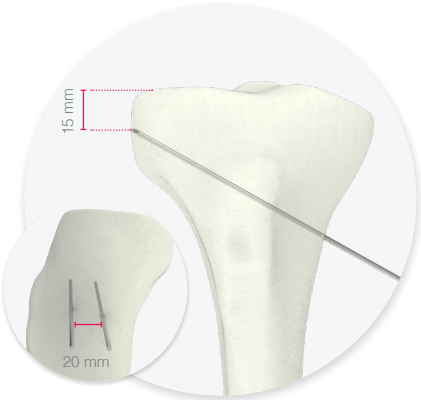
NB: to ease the insertion of the screws, use the countersink (ANC120-US) to widen the first cortex previously drilled. If the insertion of the screw is difficult, remove the screw, countersink and insert the screw again.

6. Proceed similarly for the other 4 monoaxial locking holes.

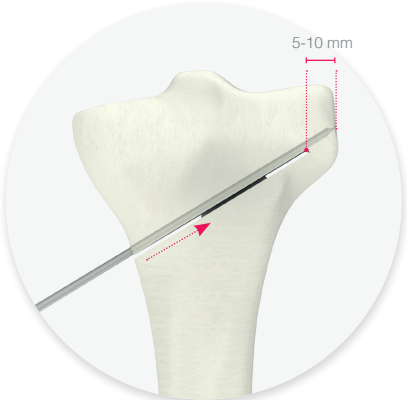
The construct is complete when the metallic wedge is removed.

HIGH TIBIAL OSTEOTOMY - BIPLANAR CUT*

** A biplanar cut must be performed with an Activmotion plate size 2.*

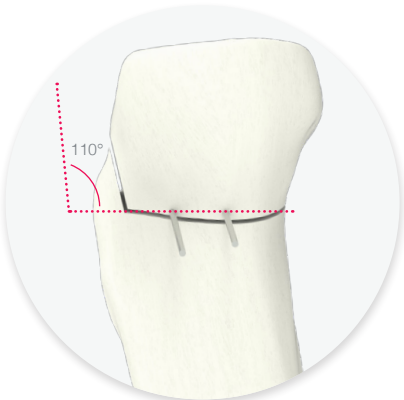


1. To perform the osteotomy cut, insert:
   - **The first pin** from the insertion of the hamstring until reaching the lateral cortex, 15 mm below the tibial plateau ridge.
   - **The second pin** parallel to the first one with 20 mm distance between both pins, to maintain the tibial slope.



2. The osteotomy cut is performed in two steps

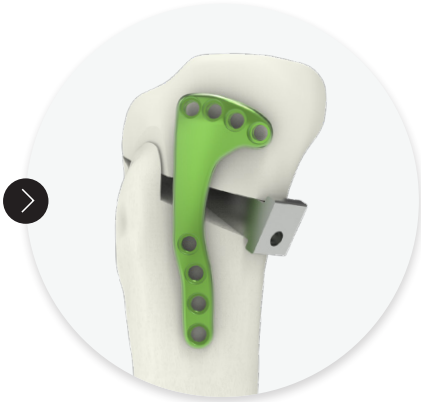
a) **Ascending osteotomy cut:**
The cut is performed by the oscillating saw, alongside and below the two pins. Stop the incision 5-10 mm from the lateral cortex area.



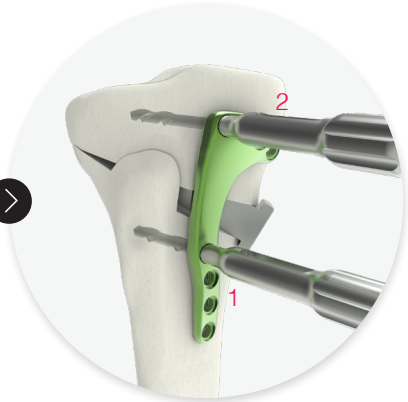
b) **Transverse osteotomy cut:**
Perform the anterior transverse osteotomy cut behind the tibial tuberosity at a resulting angle of around 110° to the ascending cut.

3. Insert wedges of increasing sizes until finding the appropriate one (6-16 mm) while maintaining the lateral surface of the tibia. Once the appropriate wedge has been inserted, the angular correction is maintained during osteosynthesis.

   Alternatively, the Meary pliers can be used to increase the size of the opening.



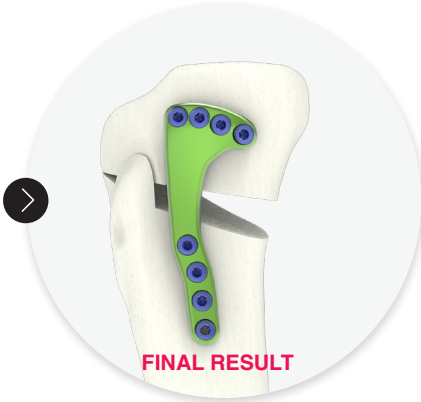
4. Position the plate onto the antero-medial side so that the distal part of the plate runs parallel to the tibial tuberosity.



5. Lock the first Ø4.0 mm guide (ANC212) in the hole under the osteotomy cut, then start drilling using a Ø4.0 mm drill bit (ANC211)(1). Above the osteotomy cut, insert a second Ø4.0 mm guide in the most anterior hole (2) of the plate. Drill using a Ø4.0 mm drill bit (ANC211).The screw length can be directly read on the drill at the rear of the drill guide or thanks to the length gauge (ANC210). Remove the drill guides. Insert and lock the screws. The final tightening of the screws must be performed by hand.

NB: to ease the insertion of the screws, use the countersink (ANC120-US) to widen the first cortex previously drilled. If the insertion of the screw is difficult, remove the screw, countersink, and insert the screw again.

6. Proceed similarly for the remaining locking holes.



The construct is complete when the metallic wedge is removed.

IMPLANTS REFERENCES

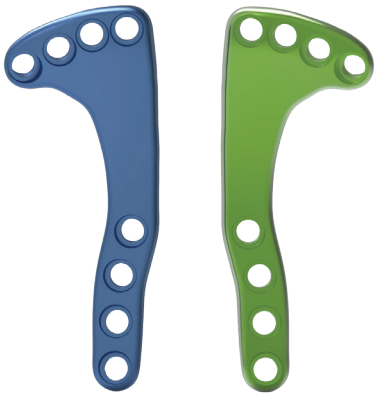
OPENING TIBIAL PLATES SIZE 1

Ref.	Description
ATDP1-ST	Medial opening wedge HTO plate - Right - Size 1 - STERILE
ATGP1-ST	Medial opening wedge HTO plate - Left - Size 1 - STERILE

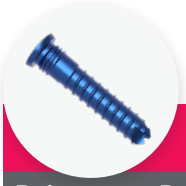
ATGP1 ATDP1

OPENING TIBIAL PLATES SIZE 2

Ref.	Description
ATDP2-ST	Medial opening wedge HTO plate - Right - Size 2 - STERILE
ATGP2-ST	Medial opening wedge HTO plate - Left - Size 2 - STERILE



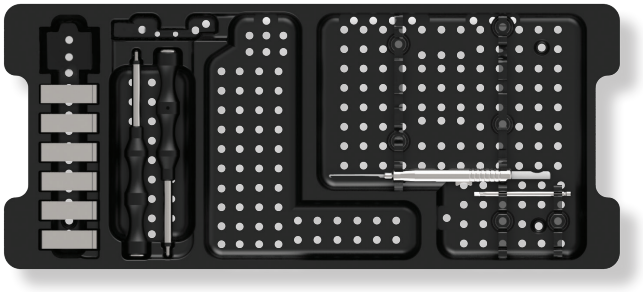
ATGP2 ATDP2



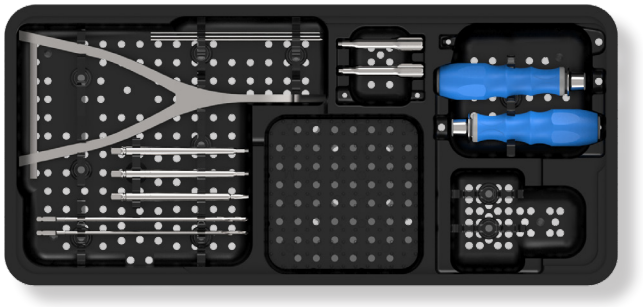
Ø4.5 MM DTS® SELF TAPPING SCREWS

Ref.	Description
ST4.5L30-ST	DTS® self-tapping screw - Ø4.5 mm - L30 mm - STERILE
ST4.5L35-ST	DTS® self-tapping screw - Ø4.5 mm - L35 mm - STERILE
ST4.5L40-ST	DTS® self-tapping screw - Ø4.5 mm - L40 mm - STERILE
ST4.5L45-ST	DTS® self-tapping screw - Ø4.5 mm - L45 mm - STERILE
ST4.5L50-ST	DTS® self-tapping screw - Ø4.5 mm - L50 mm - STERILE
ST4.5L55-ST	DTS® self-tapping screw - Ø4.5 mm - L55 mm - STERILE
ST4.5L60-ST	DTS® self-tapping screw - Ø4.5 mm - L60 mm - STERILE
ST4.5L65-ST	DTS® self-tapping screw - Ø4.5 mm - L65 mm - STERILE
ST4.5L70-ST	DTS® self-tapping screw - Ø4.5 mm - L70 mm - STERILE
ST4.5L75-ST	DTS® self-tapping screw - Ø4.5 mm - L75 mm - STERILE
ST4.5L80-ST	DTS® self-tapping screw - Ø4.5 mm - L80 mm - STERILE
ST4.5L85-ST	DTS® self-tapping screw - Ø4.5 mm - L85 mm - STERILE
ST4.5L90-ST	DTS® self-tapping screw - Ø4.5 mm - L90 mm - STERILE

INSTRUMENTS REFERENCES



INSERT (ANC279/I)



BASE (ANC279/B)

INSTRUMENTS

Ref.	Description	Qty
ANC019	Metallic wedge for knee osteotomy - 6 mm high	1
ANC020	Metallic wedge for knee osteotomy - 8 mm high	1
ANC021	Metallic wedge for knee osteotomy - 10 mm high	1
ANC022	Metallic wedge for knee osteotomy - 12 mm high	1
ANC023	Metallic wedge for knee osteotomy - 14 mm high	1
ANC024	Handle for metallic wedge and cutting guide	2
ANC025	Metallic wedge for knee osteotomy - 16 mm high	1
ANC119-SK	3.0 mm quick coupling hexagonal non prehensor screwdriver	2
ANC120-US	Ø4.2 mm countersink with US quick coupling system	1
ANC210	Length gauge for Ø4.5 mm screws	1
ANC211	Ø4.0 mm quick coupling drill bit	2
ANC212	Ø4.0 mm DTS Trauma drill guide	2
ANC990	Activmotion Meary pliers	1
ANC312	3.0 mm quick coupling hexagonal screwdriver	1
ANC352	Ø6 mm US quick coupling handle	2
33.0222.150	Pin Ø2.2 L150 mm	3

OPTIONAL INSTRUMENTS

Ref.	Description	Qty
ANC620	Ø2.2 mm pin guide	1
ANC621	Chisel Pauwels - 10*240 mm	1
ANC622	Chisel Pauwels - 25*240 mm	1
ANC628	Chisel Pauwels - 15*240 mm	1
ANC629	Chisel Pauwels - 20*240 mm	1
ANC652	HTO Alignment rod	3
ANC653	Support for HTO alignment rod	1
ANC785	Ø2.2 mm pin guide	2
ANC860	Metallic wedge for knee osteotomy - 18 mm high	1
4550-R	Hohmann retractor radiolucent	1

Patient Specific Instruments (PSI) are also available. For more information, please refer to the **Activmotion-PSI brochure.**

REMOVAL KIT

If you have to remove ACTIVMOTION implants, make sure to order the **Newclip Technics removal set** which includes the following instruments:

- ANC119-SK: 3.0 mm quick coupling hexagonal non prehensor screwdriver
- ANC352: Ø6 mm US quick coupling handle
- ANC312: 3.0 mm quick coupling hexagonal screwdriver

Brochure EN - Activmotion HTO size 1 & 2 - Ed3 - 03/2021 - Medical device EC: class IIb - CE 1639 SGS BE - Read labeling and instructions before use.

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