

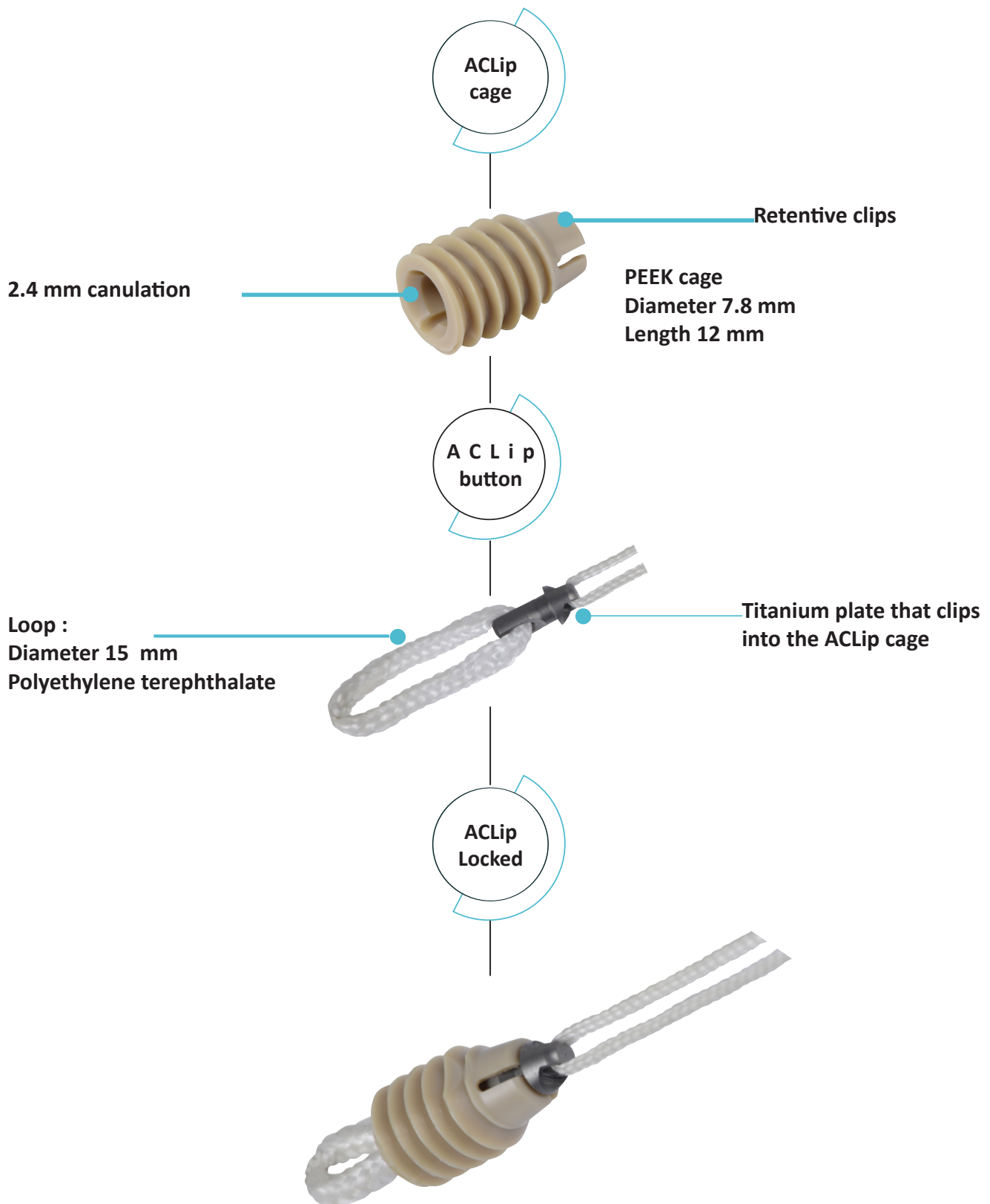
Surgical technique



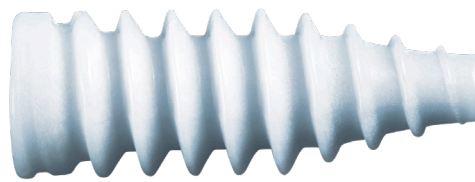
# Summary

Concept and range .....	4
Surgical technique overview.....	10
Step 1 - Femoral tunnel placement.....	11
Step 2 - Femoral tunnel drilling .....	12
Step 3 - ACLip cage screwing .....	13
Step 4 - ACLip clipping.....	14
Step 5a- Tibial fixation by eclipse.....	15
or 5b- Tibial fixation by comete control .....	16
Instrumentation.....	19
Appendix A Stepped reamer.....	22
Appendix B Introducer and shank introducer ACLip cage.....	23
Appendix C Tensile support and tie rod.....	24

# Concept and range
















# Concept and range



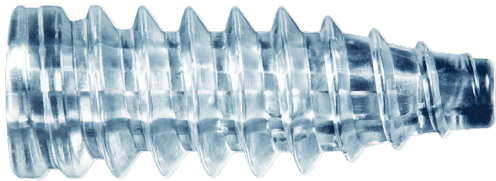
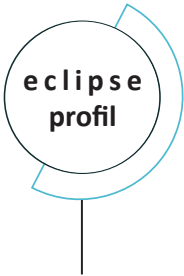
## Composition :

75% PLDLLA polylactic acid  
25% BCP : 20% HA et 80%  $\beta$ TCP

## Range :

	Length 20 mm	Length 25 mm	Length 30 mm	Length 35 mm
Ø 7 mm				
Ø 8 mm				
Ø 9 mm				
Ø 10 mm				
Ø 11 mm				
Ø 12 mm				

# Concept and range



Composition :  
100% PLDLLA polylactic acid

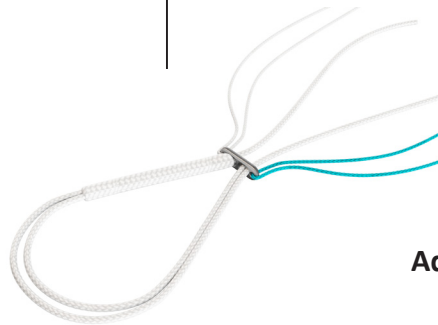
Range :

	Length 20 mm	Length 25 mm	Length 30 mm
Ø 7 mm			
Ø 8 mm			
Ø 9 mm			
Ø 10 mm			

---

# Concept and range

**COMETE**  
control



**Adjustable cortical fixation**

**COMETE**  
Extra plate

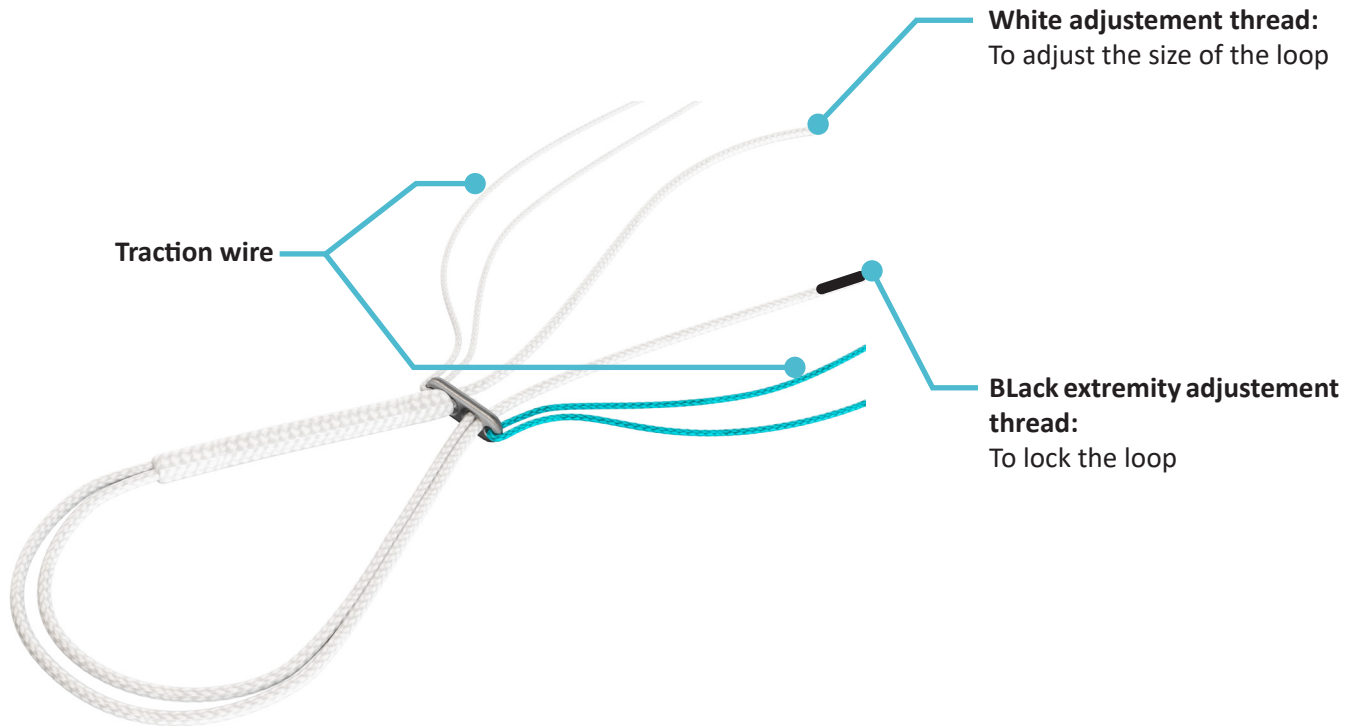


**Extra plate for 6-11 tunnel**

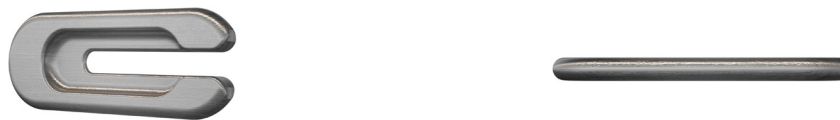
---

# Concept and range

## Adjustable cortical fixation



## Plate for 6 to 11 mm tunnel



---

# Concept and range

## comete control

- Comete control is made of a green and a white traction wire.  
**To pass the comete control plate through the tunnel, tract the white or the green traction wires. Pull the other traction wire and adjustment threads without applying tension.**
- Comete control two adjustment threads:
  - White adjustable thread to adjust the loop.
  - Black adjustable thread to lock the loop.
- To adjust the loop: start pulling the white adjustment thread and pull the same length with the black thread. Reproduce the movement until adjust the loop to the desired length.
- Do not force on the locking thread during the loop adjustment time.
- Lock the comete control: Hold a tension on the white adjustable thread and pull tightly the black adjustment thread to lock the loop.

## comete extra plate

- Dimension:

Length	20 mm
Width	7 mm
Thickness	1.50 mm

## Implant comete control et extra plate

- After removing one of the traction threads, place the Comete extra plate under the Comete Control plate. The remaining traction thread must be positioned on the open side of the upper plate to ensure proper fitting. This step will also allow the traction thread to be easily removed.

### NOTE

**This document is aimed to have a correct use of instrumentation set. Anatomical access and surgical technique are under responsibility of surgeon.**

---

# Surgical Technique Overview

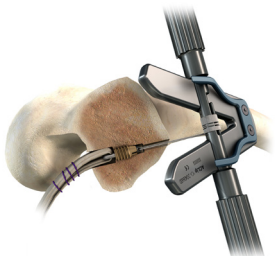
1  
**Femoral Tunnel drilling**



2  
**ACLip cage screwing**



3  
**Femoral Locking**



---

# 1 Femoral tunnel placement



Select the offset of the In-Out femoral guide according to the drilling diameter.  
The guide offset must be at least one millimeter greater than the drilling radius.

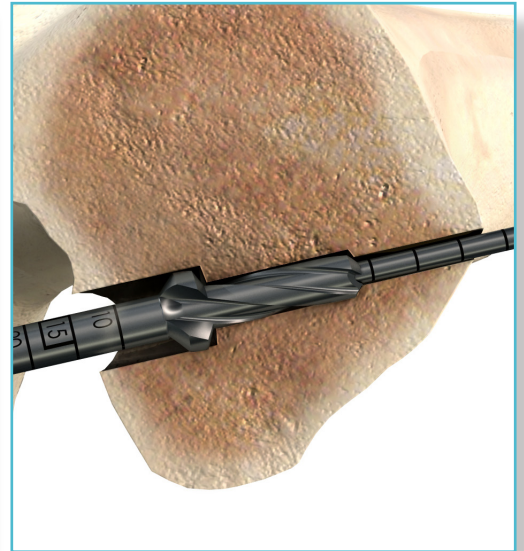
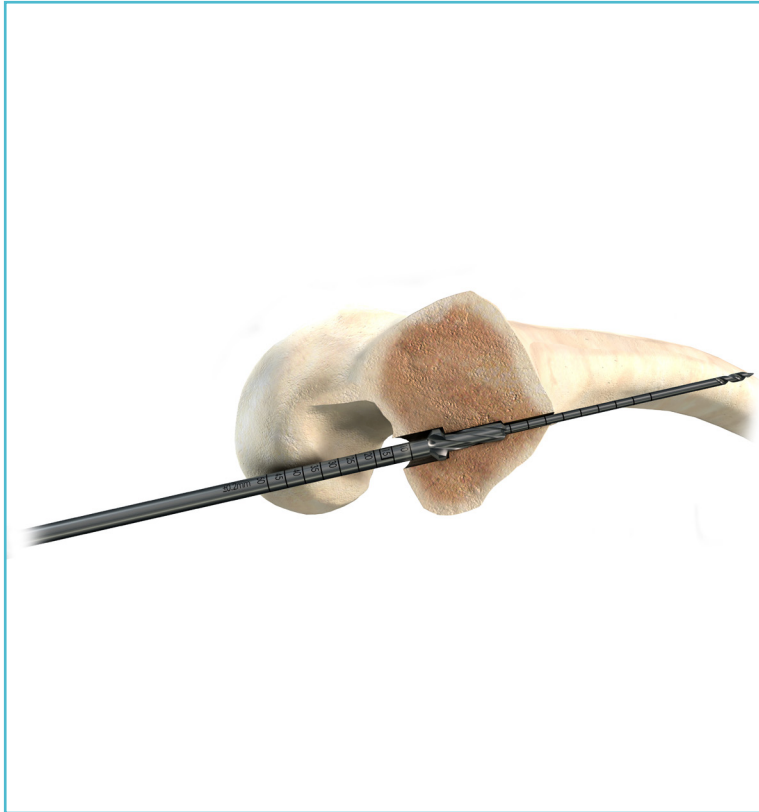
The guide's hook should be positioned in contact with the posterior cortex of the lateral condyle.  
The guide tip ensures stability.

Place the eyelet pin through the femoral guide until it passes the lateral cortex.

The graduated eyelet pin is used to measure the total length of the femoral trajectory (or between the medial and lateral cortices) by measuring the graduation of the pin in contact with the medial cortex.

Remove the guide

## 2 Femoral tunnel drilling



Select the stepped reamer corresponding to the graft diameter and place it over the eyelet pin. The graduations on the stepped reamer correspond to the length of the graft tunnel. Drill a femoral socket of the appropriate depth and then remove the reamer while leaving the eyelet pin.

The total length of these 2 femoral tunnels is: the femoral tunnel dedicated for the graft length plus 17 mm (the femoral tunnel dedicated for the ACLip cage).

### Example :

Graft tunnel = 15mm.

The total length of the two tunnels  $15\text{mm} + 17\text{mm} = 32\text{mm}$ . the distance cortex to cortex must be at minimum 32mm.

For a 20mm graft tunnel, the distance cortex to cortex must be at minimum 37mm.

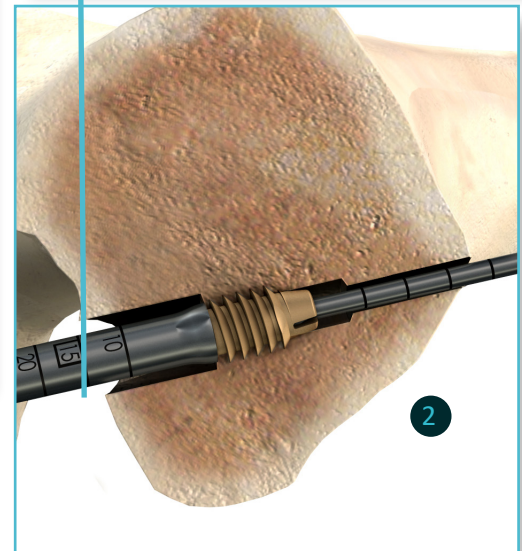
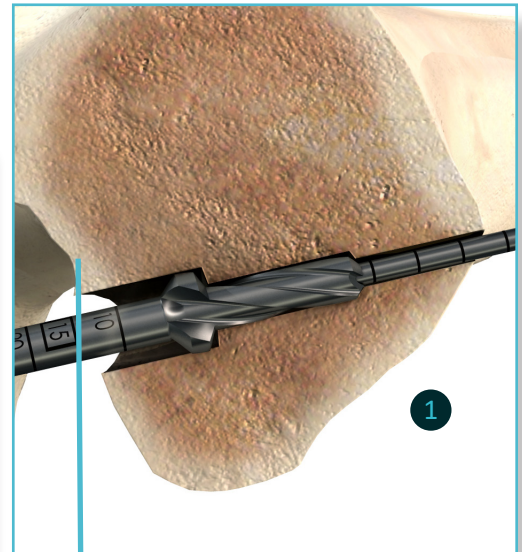
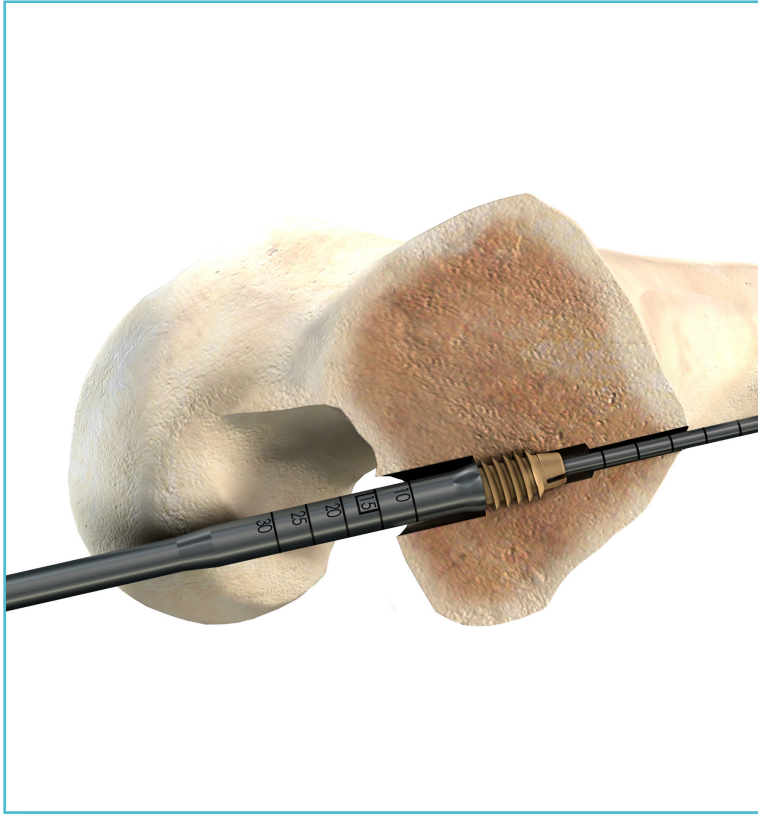
- keep the pin axis
- when you drill to ovoid pin twistin.
- when you pull out the reamer to allow the removal of the reamer and avoid enlarging the tunnel dedicated to the cage.

### Key factor

At the end of the drilling procedure, take a landmark on the lateral side of the condyle to locate the drilling depth graduation on the reamer. This mark will be used for the cage introducer to reproduce the screwing and drilling depth.

## 3

## ACLip cage screwing



Place the ACLip cage on the Shank introducer ACLip cage Trinkle or on ACLip cage introducer.  
Place the Shank introducer ACLip cage Trinkle or on ACLip cage introducer over the eyelet pin.

Screw the ACLip cage. The screwing depth graduation(2) must be the same as the graduation shown on the stepped reamer when the tunnel was drilled(1).



**Screw on the ACLip cage while keeping the eyelet pin axis, in order not to apply excessive lever arm between the tip of the introducer and the eyelet pin.**

**A lever arm will weaken the tip of the ACLip cage introducer. Like it happens for any canulated instrument.**

**In case of dense bone, use the ACLip cage starter or the shank starter ACLip cage Trinkle to prepare the screwing.**

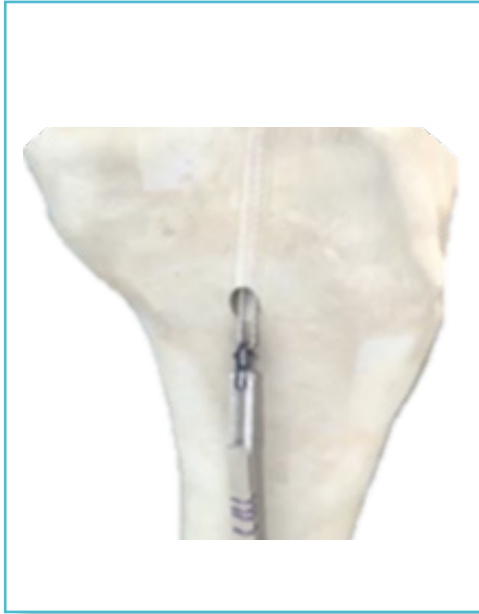
Remove the cage introducer while leaving the eyelet pin in place.

#### Key factor

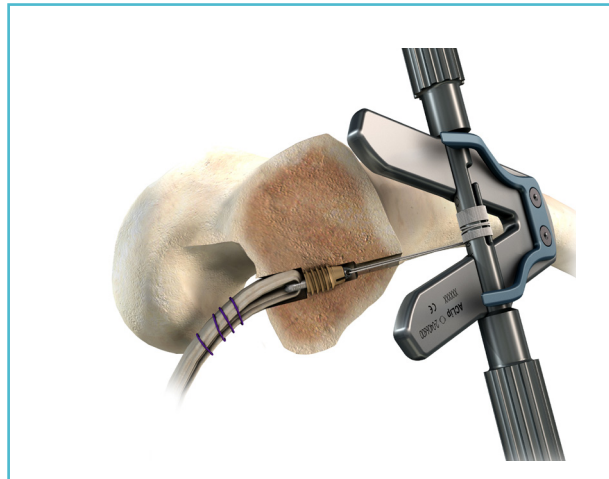
**When screwing in, keep the mark on the lateral side of the condyl and graduation used for drilling.**

**Keeping the drilling depth and screwing depth guarantees the right positioning on the cage that ensures clipping and mechanical properties.**

## 4 ACLip clipping



Assemble the tie rod and support.  
Gently pull on the ACLip button traction sutures until the ACLip button stops against the ACLip cage.



Place the traction wires on the tie rod.  
Position the clipping system on the patient's leg where the traction sutures exit.  
Tighten the traction wires then turn the tie rod until the ACLip clipping.  
Control the fixation by pulling the graft on the tibial side.

---

## 5 Tibial fixation by ECLIPSE

### STG or ST4 graft



#### Tapping :

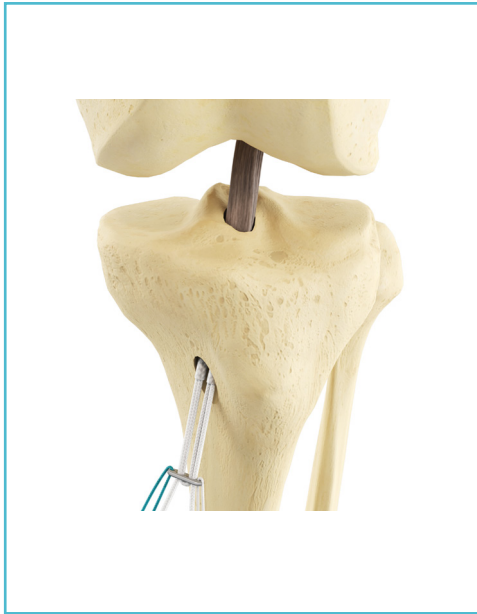
- Pull the suture wire of the graft at the tibial level
- Place the screwguide wire into the tibial tunnel
- Pass the Starter Tap or the shank starter onto the the screwguide wire
- Thread the tunnel

#### Screwing :

- Put the interference screw (eclipse BCP or eclipse profil) onto the Universal screwdriver Biomatlante Ø 7-8-9-10-11-12mm or the shank screwdriver
- Place the pin guide into the tunnel tibial
- Insert the screw and the screw driver onto the pin guide
- Screw onto the guide pin while maintaining the desired tension on the traction sutures.

## 5 Tibial fixation by comete control

### ST4 graft



Use comete extra plate to increase the cortical contact surface. Remove one of the two traction wire. Slide the extended plate under the button. Make sure that the remaining wire is on the slot side to allow a fully interlocking button on the comete Extra plate.

Begin to pull the white adjustment thread and pull the same length with the black thread. Reproduce the movement until adjust the graft to the desired tension.

**Do not apply a tension on the black adjustment thread during the loop adjustment time.**

Control the graft tensioning.

Lock the loop. hold a tension on the white adjustment thread and pull tightly the black adjustment thread.

Control the graft tensioning.

Cut the adjustment threads on the tibia at a minimum distance of 10mm from the cortical button.



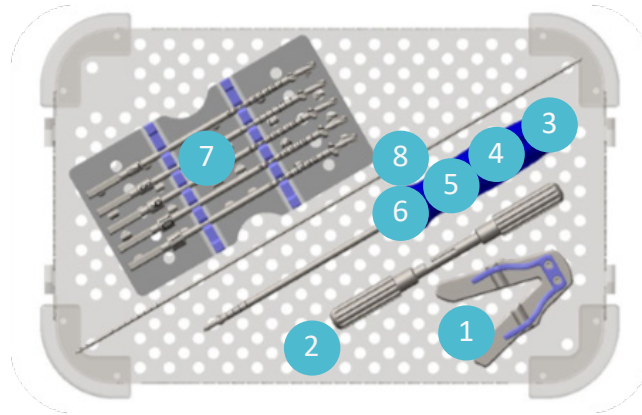
---





# Instrumentation

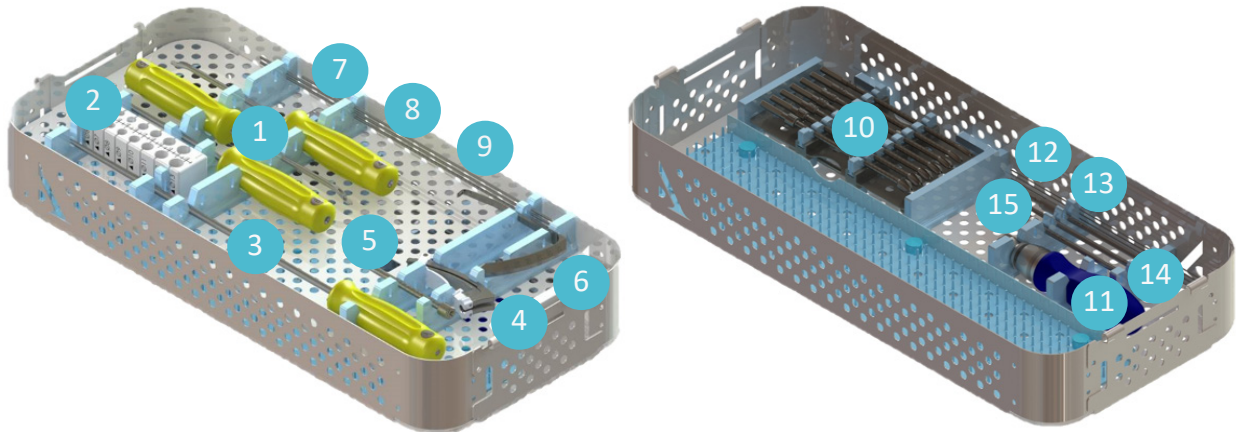
## ACLip instrumentation set



Rep	Designation	Reference	Qty
1	Tensile support	2-0406600	1
2	Tie rod	2-0408000	1
3	ACLip cage Introducer	2-0406000	1
	or	-	-
4	Shank introducer ACLip cage Trinkle	2-0407200	1
5	Starter ACLip cage	2-0408600	1
	or	-	-
6	Shank starter ACLip cage Trinkle	2-0408610	1
	Stepped reamer $\varnothing 5 \times \varnothing 7$ mm	2-0406530	1
	Stepped reamer $\varnothing 5 \times \varnothing 7.5$ mm	2-0406535	1
	Stepped reamer $\varnothing 5 \times \varnothing 8$ mm	2-0406540	1
	Stepped reamer $\varnothing 5 \times \varnothing 8.5$ mm	2-0406545	1
7	Stepped reamer $\varnothing 5 \times \varnothing 9$ mm	2-0406550	1
	Stepped reamer $\varnothing 5 \times \varnothing 9.5$ mm	2-0406555	1
	Stepped reamer $\varnothing 5 \times \varnothing 10$ mm	2-0406560	1
	Stepped reamer $\varnothing 5 \times \varnothing 10.5$ mm	2-0406565	1
	Stepped reamer $\varnothing 5 \times \varnothing 11$ mm	2-0406570	1
8	ACLip eyelet pin	2-0404701	2

# Instrumentation

## Inside-Out modular instrumentation set



Rep	Designation	Reference	Qty
1	5 mm IN/OUT femoral guide	2-0405305	1
	6 mm IN/OUT femoral guide	2-0405306	1
	7 mm IN/OUT femoral guide	2-0405307	1
2	Graft sizer	2-0401800	1
3	Open stripper Ø5 mm	2-0405505	1
4	Modular guide body / handle	2-0404800	1
5	Modular tibial guide sleeve	2-0404900	1
6	Modular tibial aimer	2-0405000	1
7	Threaded graduated Eyelet pin Ø2.4mm Lg350mm	2-0404700	1
8	Trocard eyelet pin Ø2.4 mm Lg 350mm	2-0405400	1
9	Wire pin guide Ø2.4mm Lg300mm	2-0405600	1
10	Reamer Ø 5.0 mm	2-0405210	1
	Reamer Ø 5.5 mm	2-0405215	1
	Reamer Ø 6.0 mm	2-0405220	1
	Reamer Ø 6.5 mm	2-0405225	1
	Reamer Ø 7.0 mm	2-0405230	1
	Reamer Ø 7.5 mm	2-0405235	1
	Reamer Ø 8.0 mm	2-0405240	1
	Reamer Ø 8.5 mm	2-0405245	1
	Reamer Ø 9.0 mm	2-0405250	1
	Reamer Ø 9.5 mm	2-0405255	1
	Reamer Ø 10.0 mm	2-0405260	1
11	Ratcheting handle	2-0406400	1
12	Screw guidewire Ø 1.1 mm length 240 mm	2-0405700	1
13	Nitinol guide wire diameter 1.1 mm - length 300 mm	15INBR001F10	1
14	Shank screwdriver ECLIPSE Ø7-12 mm Trinkle or Shank screwdriver ECLIPSE BCP / Profil	2-0409300 2-0406200	1
15	Shank starter Ø 7mm	2-0406300	1

---

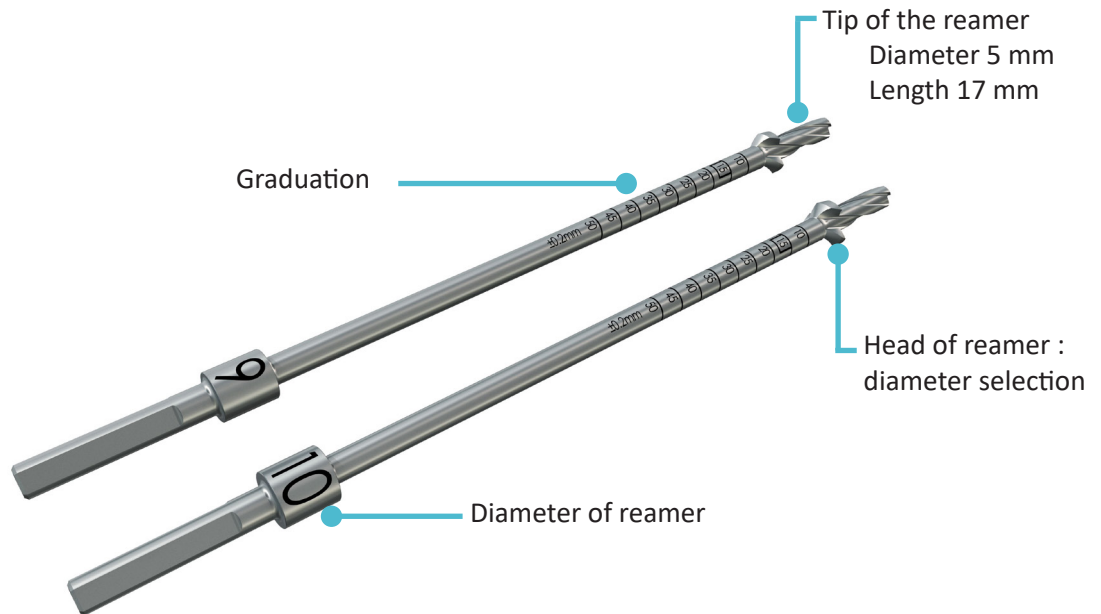
# Instrumentation

Rep	Designation	Reference	Qty
10	Short reamer Ø 5.0 mm	2-0406710	1
	Short reamer Ø 5.5 mm	2-0406715	1
	Short reamer Ø 6.0 mm	2-0406720	1
	Short reamer Ø 6.5 mm	2-0406725	1
	Short reamer Ø 7.0 mm	2-0406730	1
	Short reamer Ø 7.5 mm	2-0406735	1
	Short reamer Ø 8.0 mm	2-0406740	1
	Short reamer Ø 8.5 mm	2-0406745	1
	Short reamer Ø 9.0 mm	2-0406750	1
	Short reamer Ø 9.5 mm	2-0406755	1
	Short reamer Ø 10 mm	2-0406760	1
	Short reamer Ø 11 mm	2-0406770	1
	14	Screwdriver diameter 7 -12 mm	16INTO001
14	Starter tap	11INTA001	1



# Appendix A

## Stepped reamer

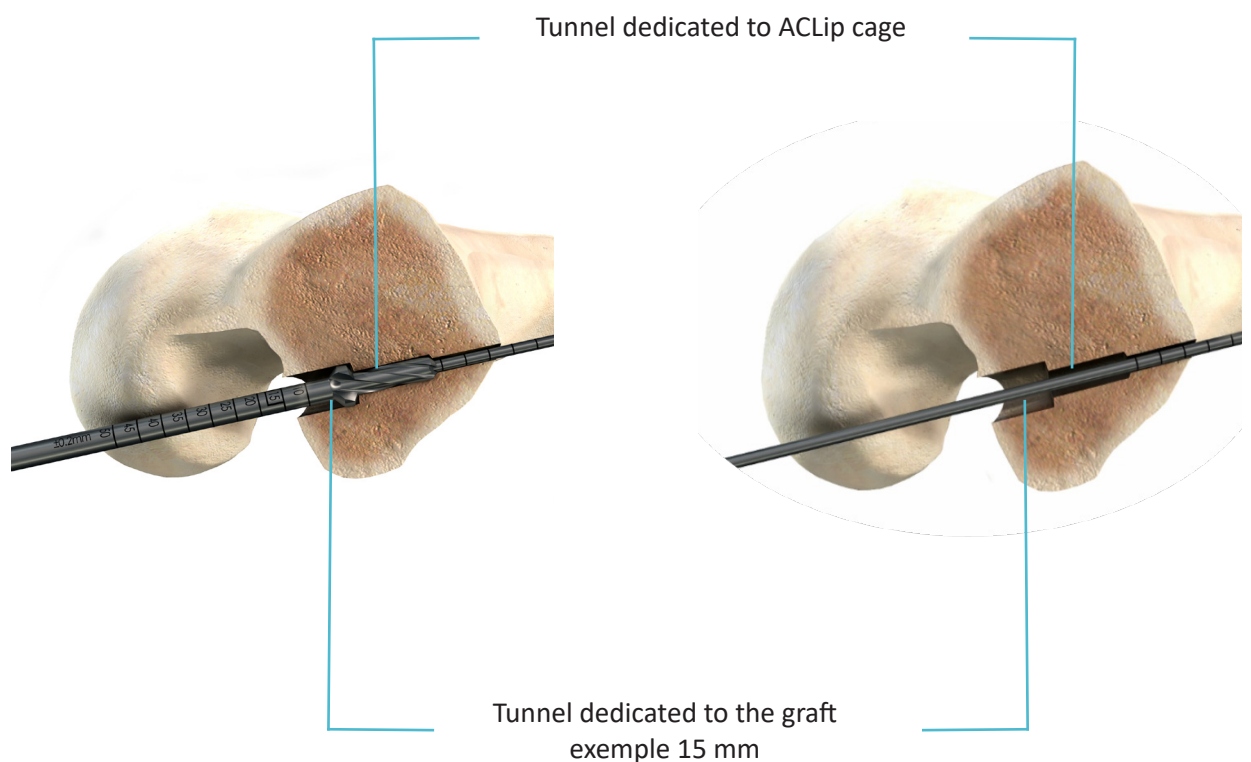


The tip of the stepped reamer is 5 mm diameter and 17 mm length to prepare the socket for the ACLip cage.

The second stepped of the reamer corresponds to graft and length diameter:

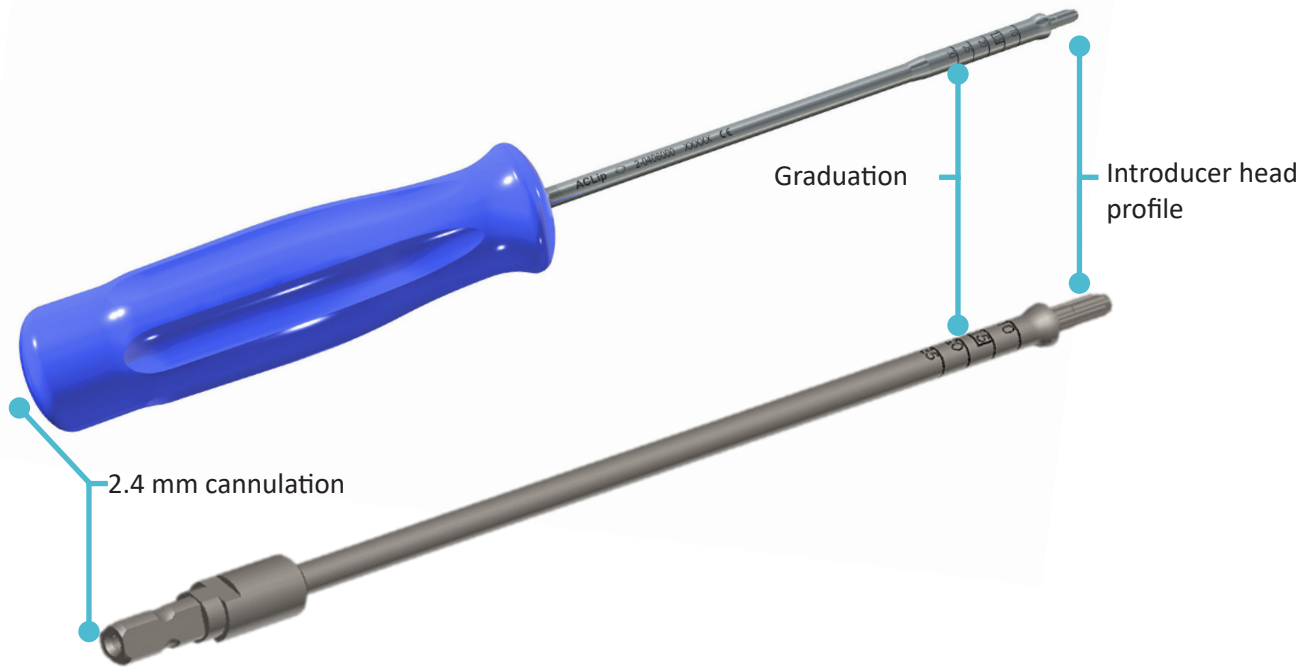
Available sizes: 7 / 7.5 / 8 / 8.5 / 9 / 9.5 / 10 / 10.5 / 11 mm.

The graduations indicate the depth of the graft tunnel.



# Appendix B

## Introducer and shank introducer ACLip cage



2.4 mm cannulation for screw fixation over eyelet pin.  
Graduations match graduations on reamer.

The ACLip cage is screwed into the bone with the same graduation as used for the stepped reamer.  
Example: 15 mm screw depth



---

# Appendix C

## Tensile support and tie rod

Tie rod



Tensile support



Assembled clipping system









*Product availability may vary by country. Please check with your local representative for availability.*

Legal manufacturer:  
AClip: AMPLITUDE, 11 cours Jacques OFFENBACH, ZA MOSART 2, 26000 Valence, France  
COMETE Control - extra plate: COUSIN BIOTECH: s.a.s Allée des Roses, 59117 Wervicq-Sud, France  
ECLIPSE BCP and Profil: COUSIN BIOTECH: s.a.s Allée des Roses, 59117 Wervicq-Sud, France

Customer Service – Export :

11, cours Jacques Offenbach, ZA  
Mozart 2,  
26000 Valence – France  
Tél. : +33 (0)4 75 41 87 41  
Fax : +33 (0)4 75 41 87 42

[www.amplitude-ortho.com](http://www.amplitude-ortho.com)