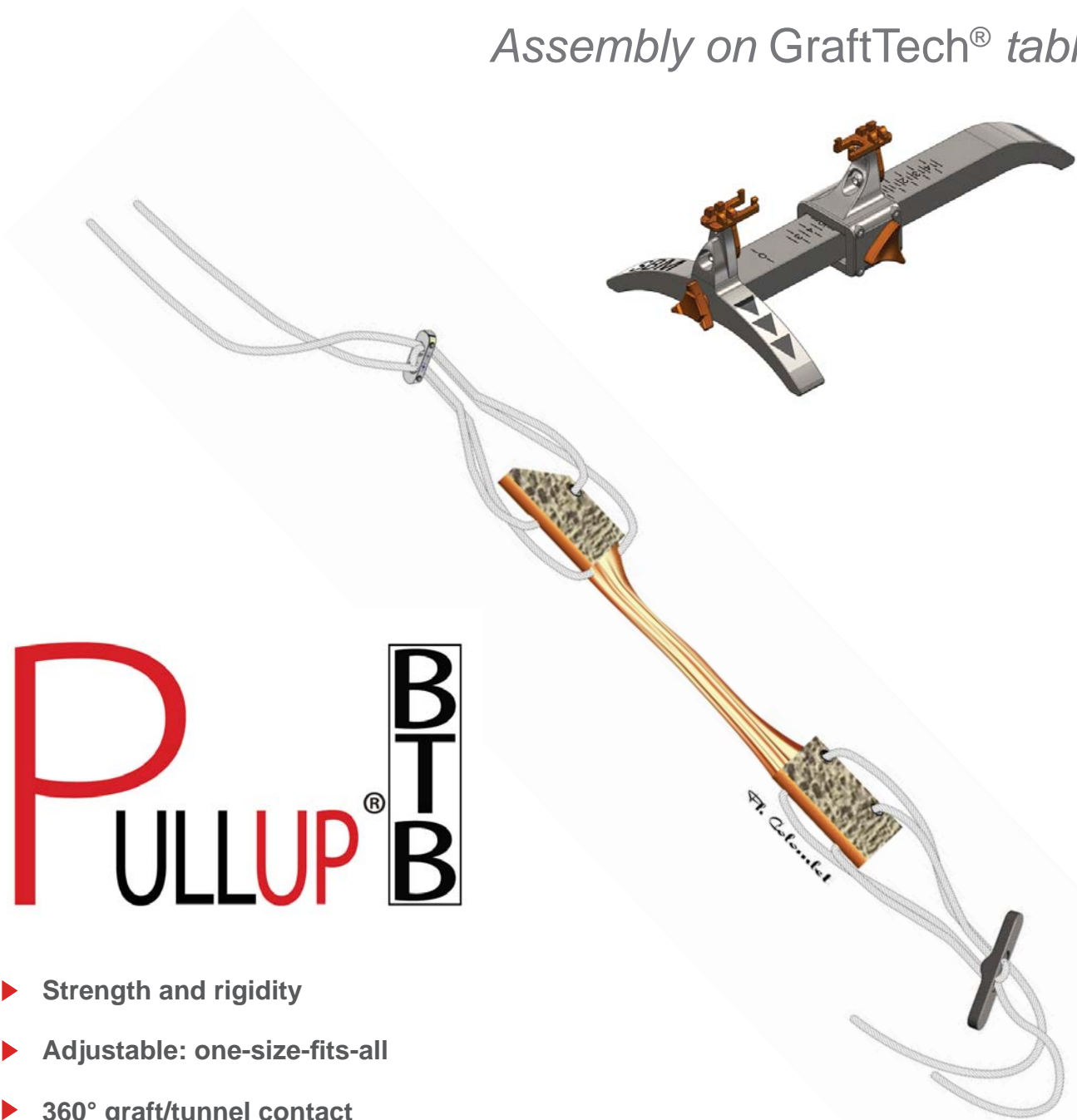
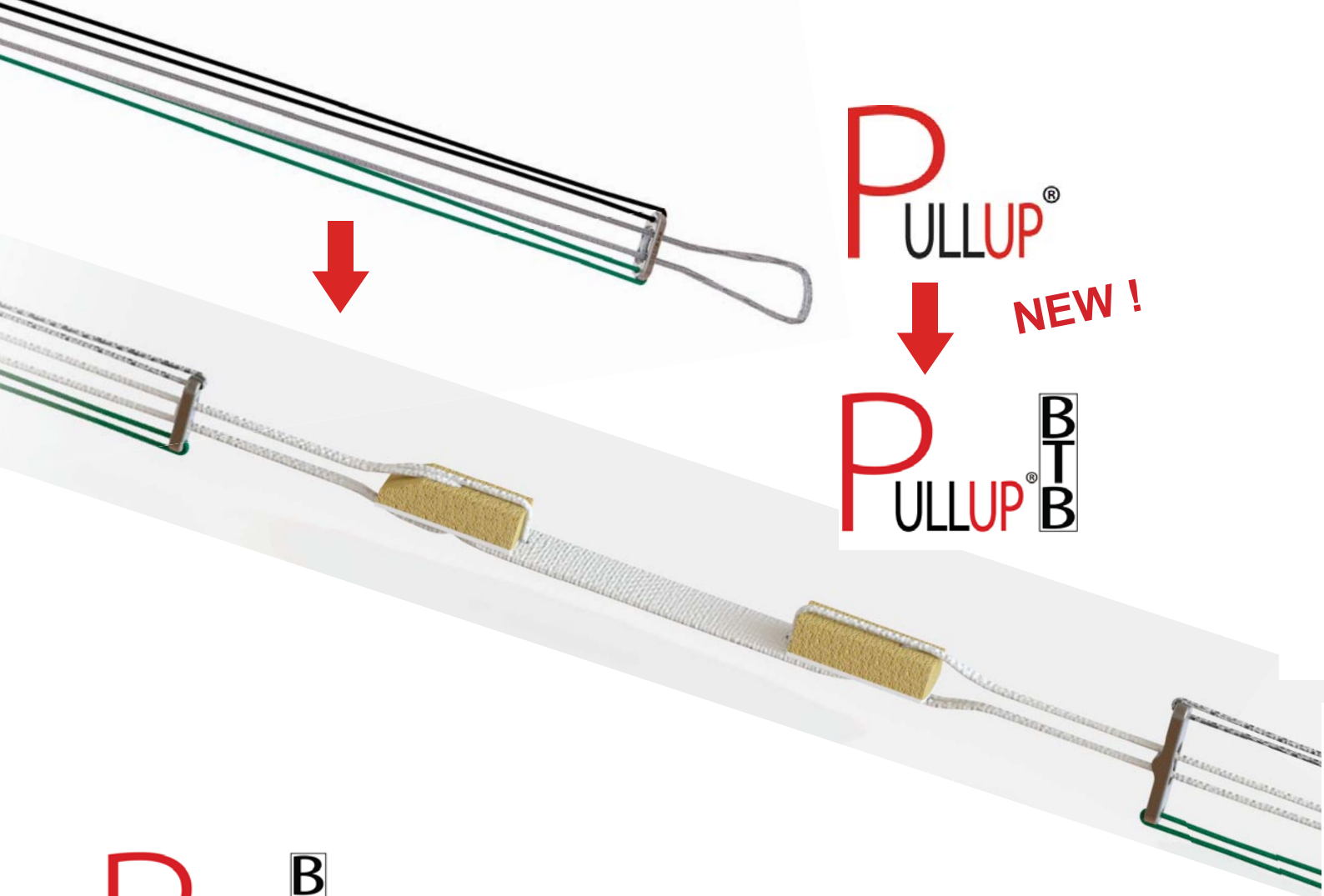


ACL Reconstruction

Adjustable juxta-cortical fixation for bone-tendon-bone grafts

Assembly on GraftTech® table

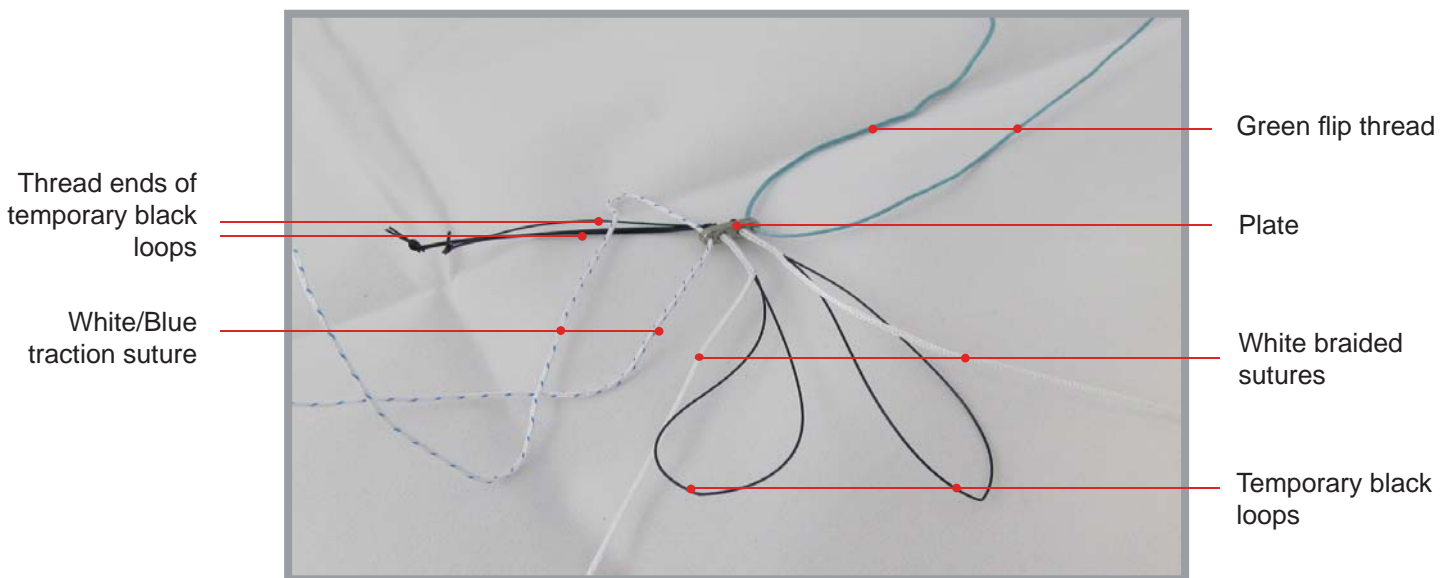




PULLUP[®]
NEW!
PULLUP[®] BTB

PULLUP[®] BTB : Product Description

Because the graft includes bone block, the loops must be passed through the bone block and tendon in the operating room.



Pull, Flip, Adjust.



Fixation solution for cruciate ligament reconstruction:

Reproducible

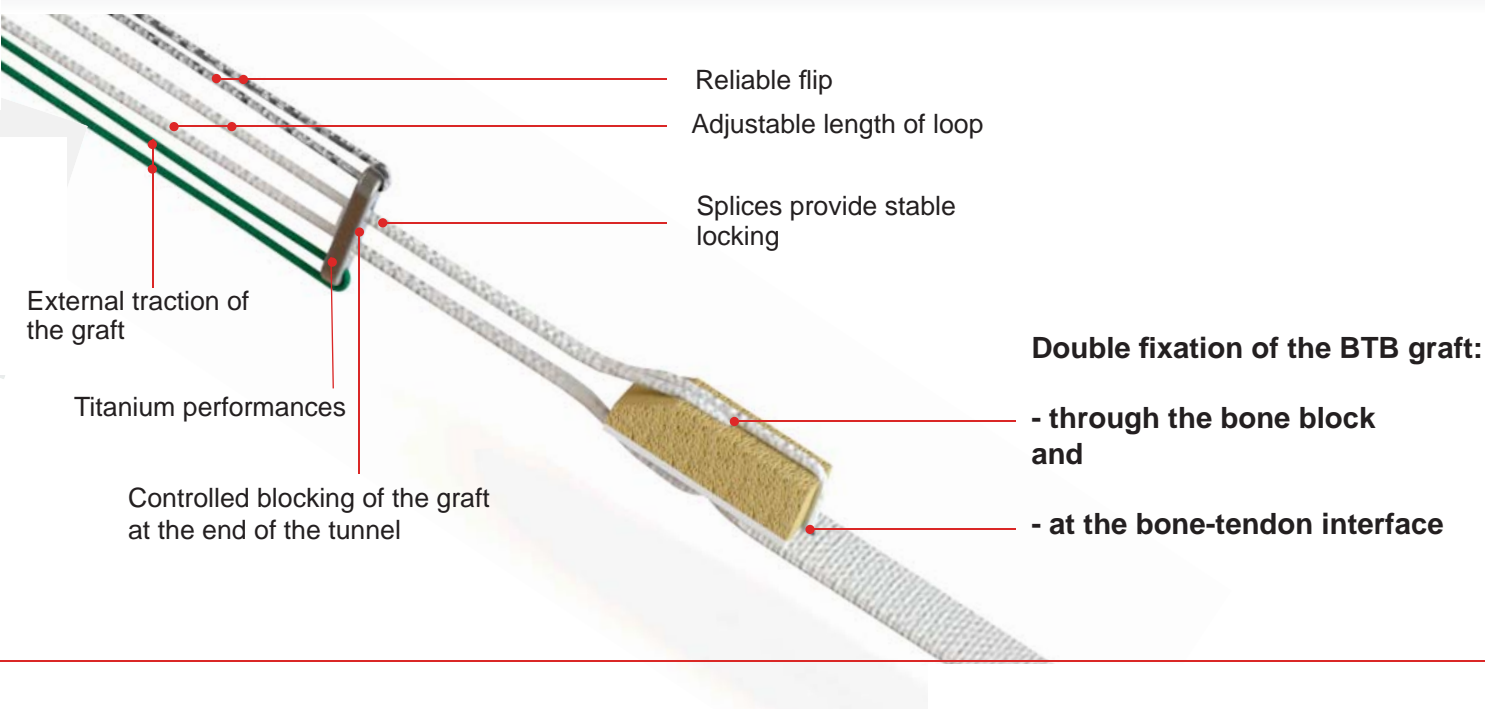
Controlled locking at base of blind tunnel, conservation of bone stock.

Simple

No pre-op planning of tunnel length, perioperative adjustment.

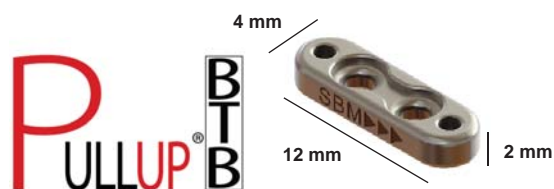
Reliable

Stable locking system, renowned materials; 360° contact within the tunnel

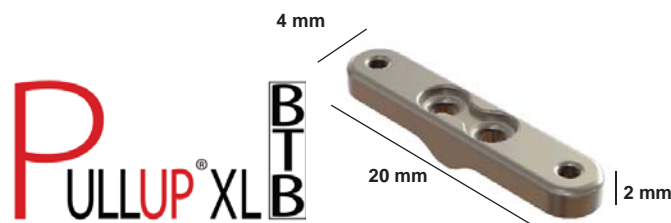


A system that can be adapted to your surgical approach

The PULLUP® system is available in two versions:



For cortical tunnels with \varnothing 4.5 mm



For cortical tunnels with \varnothing from 5 to 10 mm

Surgical technique

Specific characteristics of the PULLUP® BTB fixation

1. GRAFT HARVEST AND PREPARATION



Harvest the bone-tendon-bone graft, clean it and size it down to match the diameter of the tunnels to ease its passage through the tunnels.



Drill a first hole through the bone block

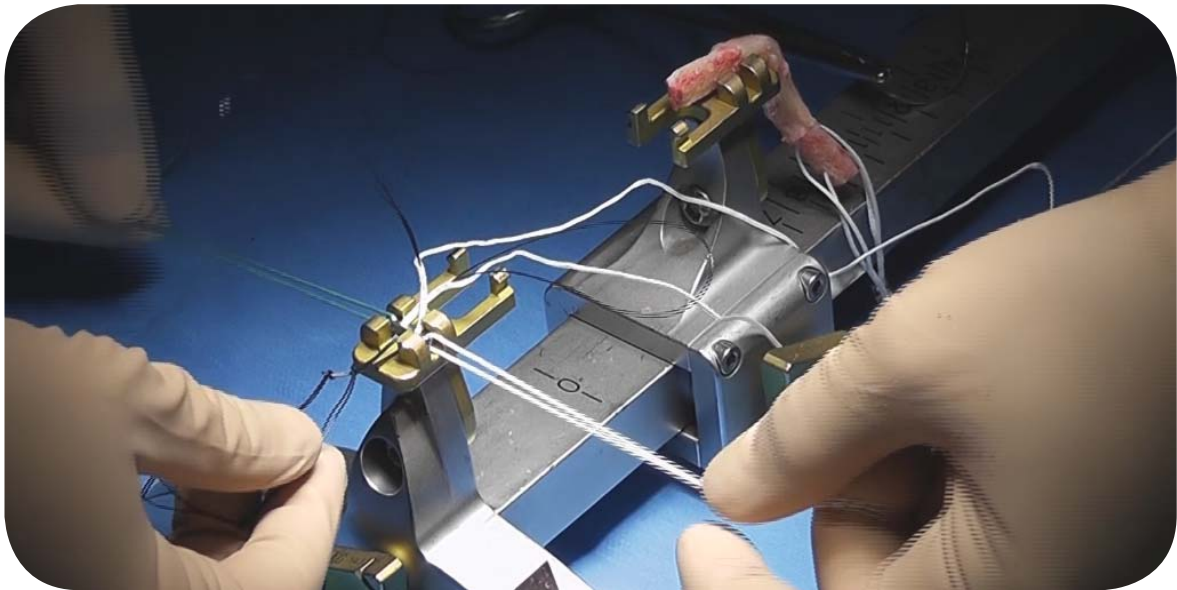
Make a first hole by drilling through the middle of the bone block with a 1.5 mm drill bit.



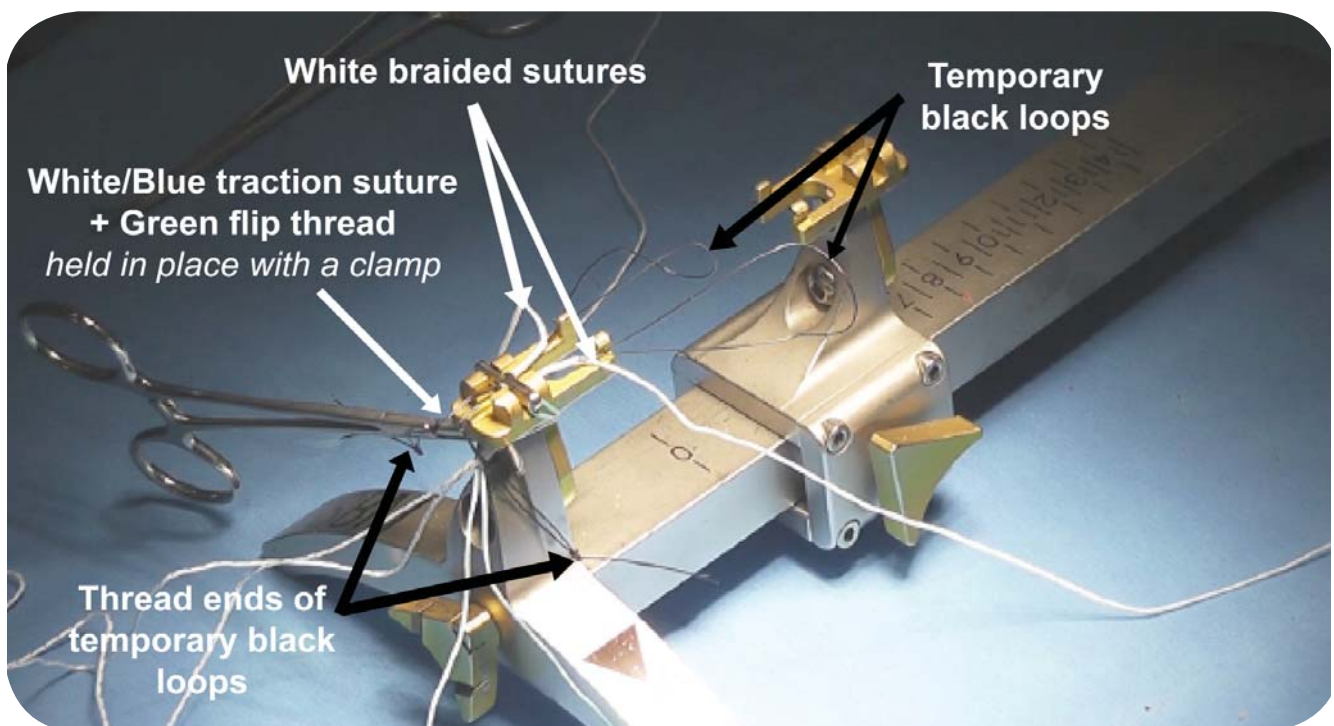
Drill a second hole through the bone/tendon interface.

Next, drill a hole through the tendinous portion close to the bone/tendon intersection. Turn the graft around and repeat both drilling instructions at the other end of the graft.

2. INSTALL THE DEVICE ON THE GratTech®



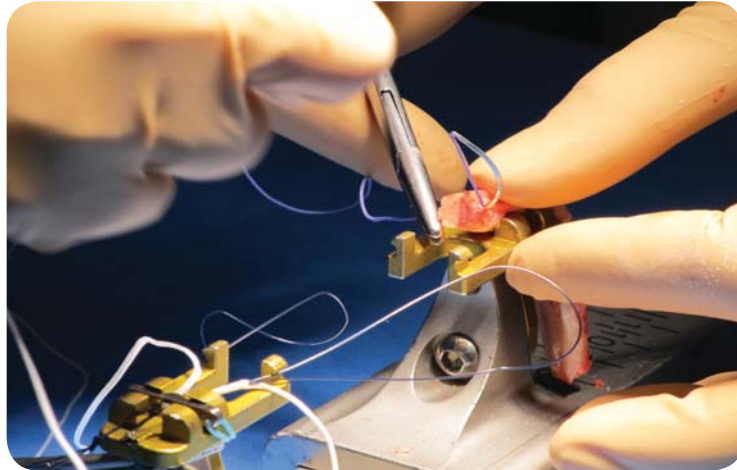
Remove the PULLUP® BTB from the mount sheet and place it on the GratTech® table.



Wind the traction and flip sutures around the table and secure them with a clamp.

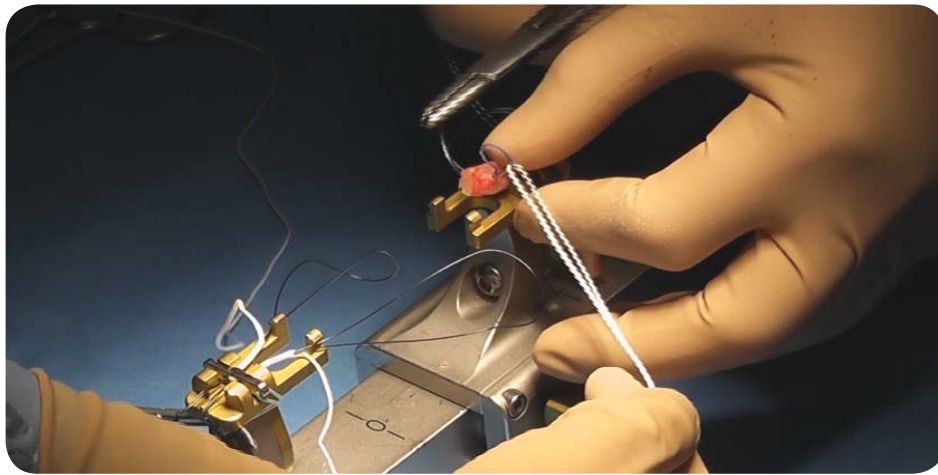
3. FIXING THE IMPLANT TO THE GRAFT

1



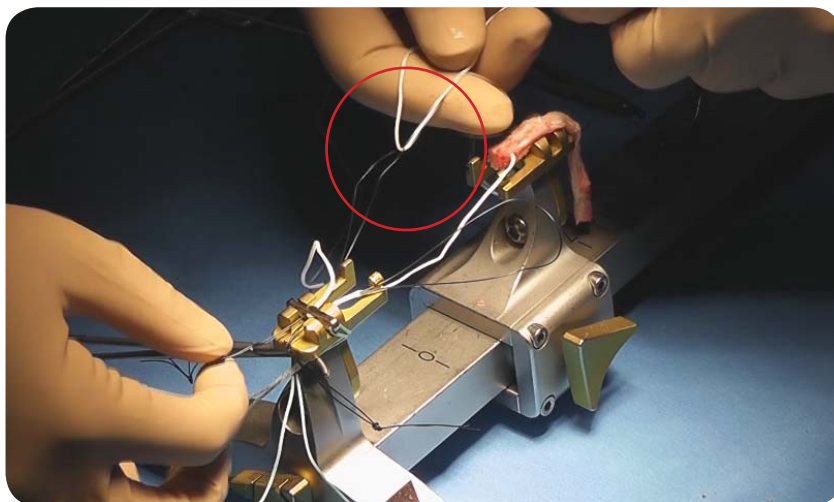
Pass a needled suture loop through the bone block.

2



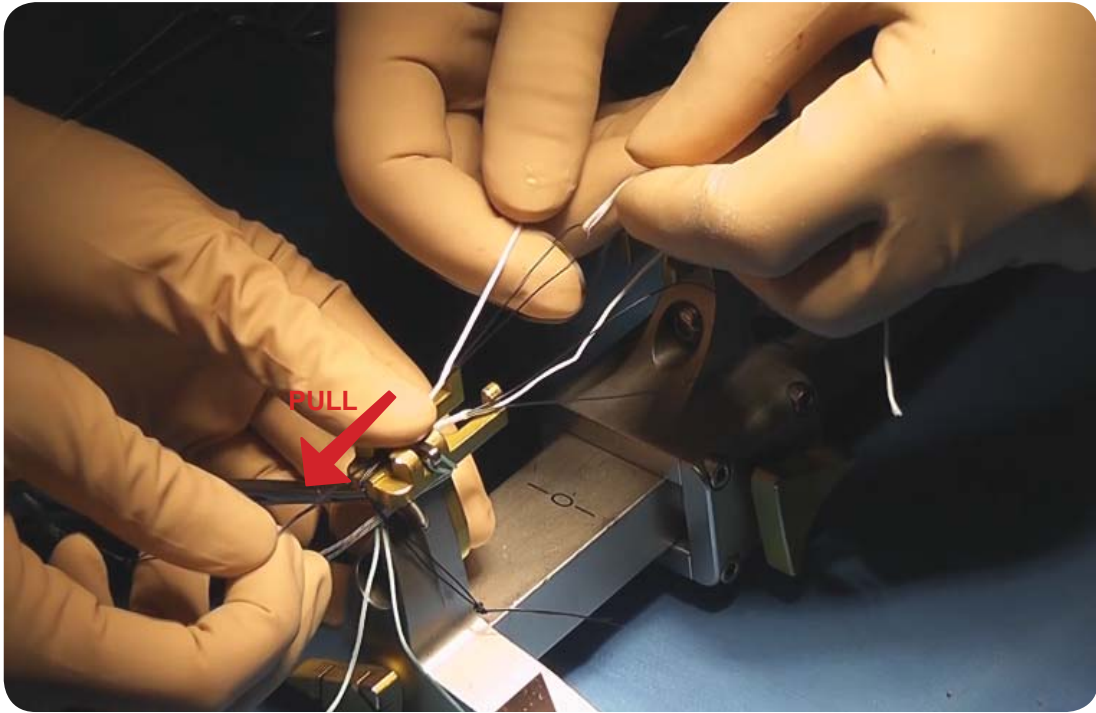
Pass one end of the white braided sutures through the suture loop.
Pull on the needle until the white braided passes through the bone block (and thus through the graft).

3



Pass the end of the white braided suture through the **opposite** temporary black loop and make a fold.

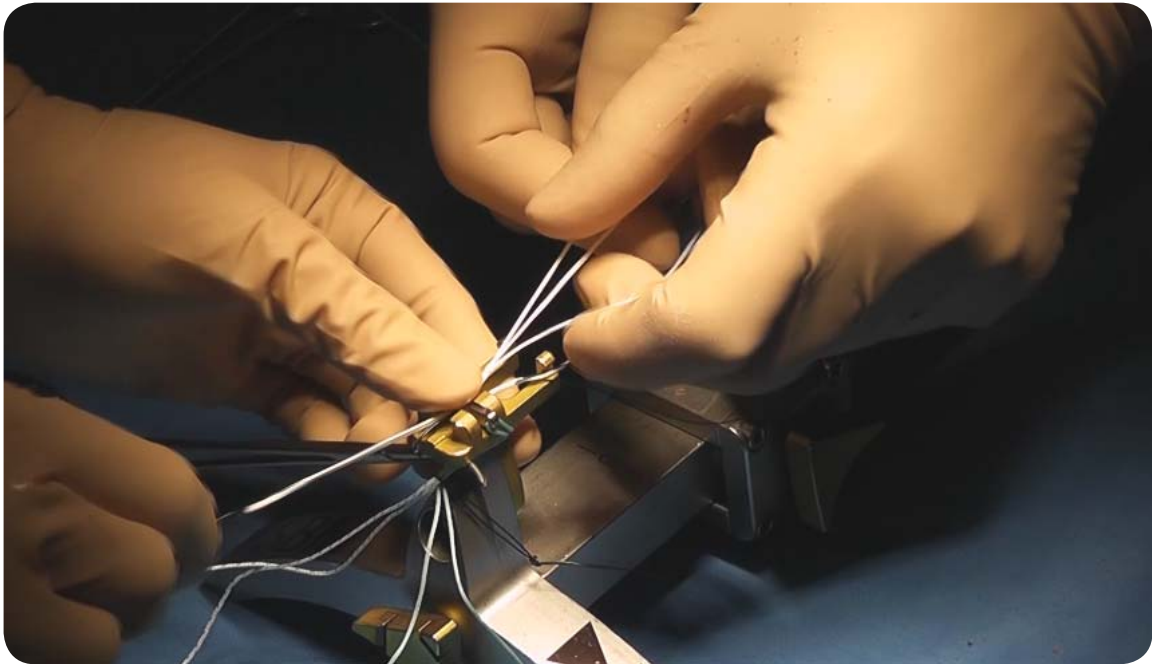
4



The scrub nurse slowly pulls on the thread end of the temporary black loop while firmly holding the plate.

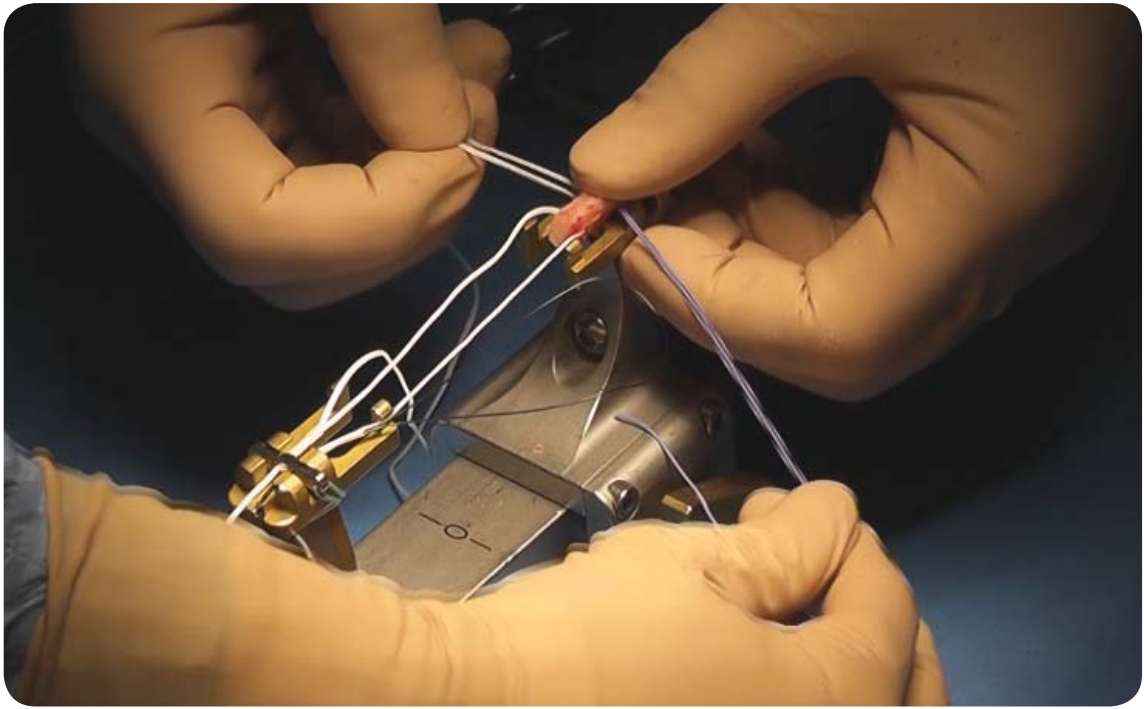
During this operation, the surgeon holds the white braided suture and makes sure that the temporary black loop goes into the splice while counter-pulling slowly on the splice.

5



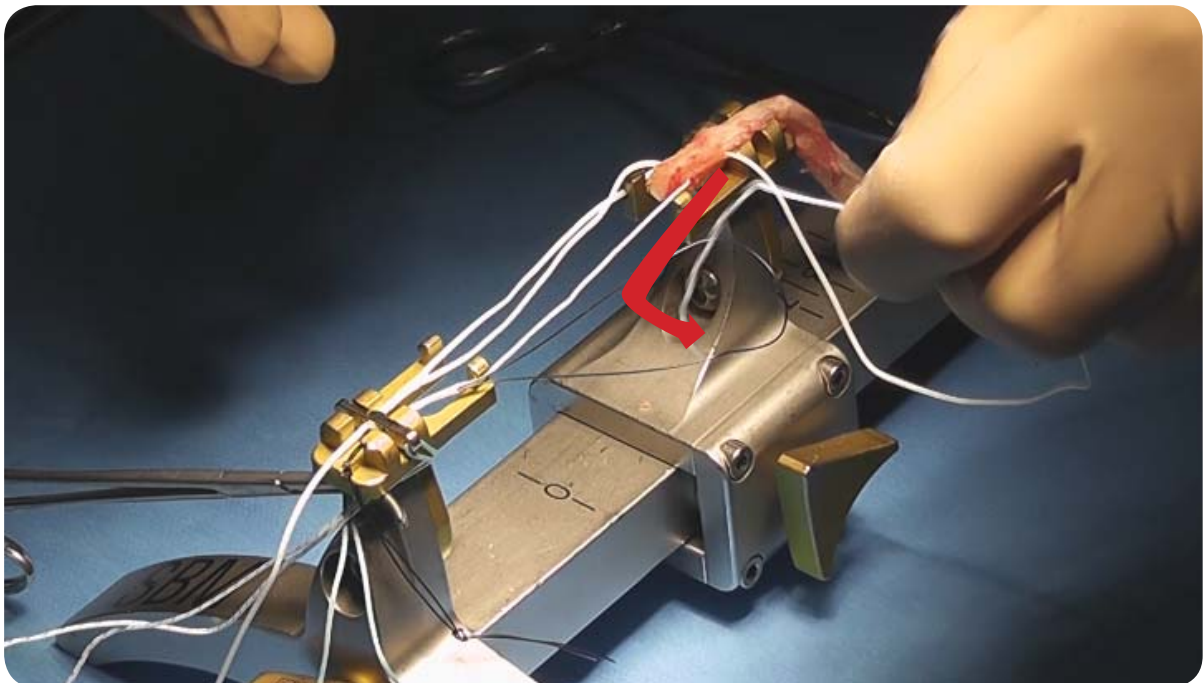
Once the temporary black loop enters the splice, pull harder while holding the rest of the construct until you hear a «click», and make the braided suture exit the button plate in order to make the first splice.

6



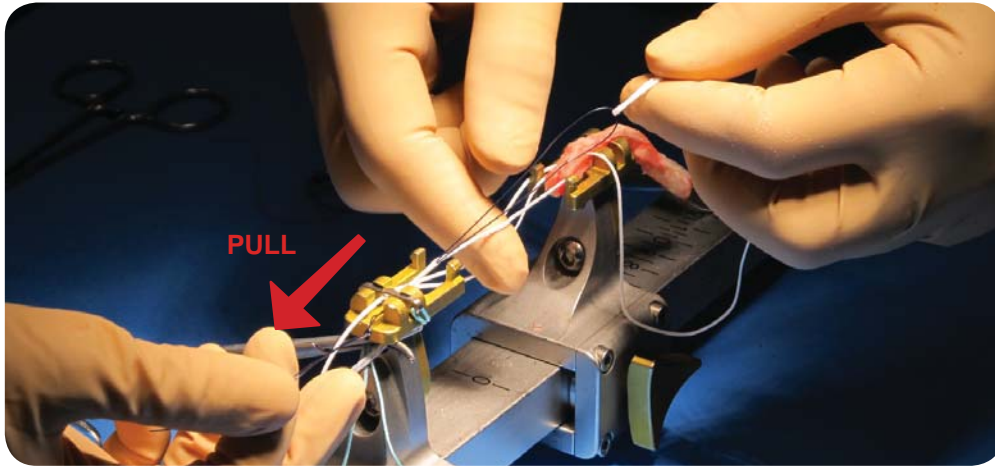
Repeat the same instructions (numbers 1 to 5) by passing the other white braided in the opposite direction through the hole located near the tendon-bone block interface.

7



Pass the end of the white braided suture through the opposite temporary black loop and make a fold.

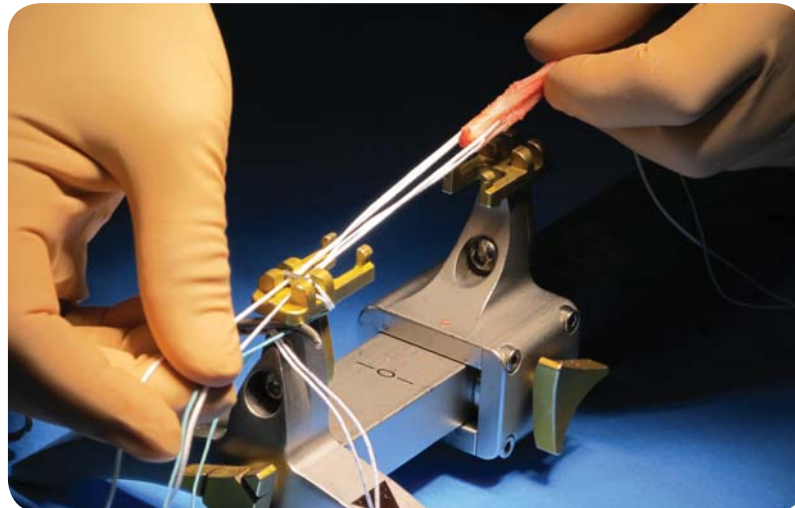
8



The scrub nurse slowly pulls on the thread end of the temporary black loop while firmly holding the plate. During this operation, the surgeon holds the white braided suture and makes sure that the temporary black loop goes into the splice while counter-pulling slowly on the splice.

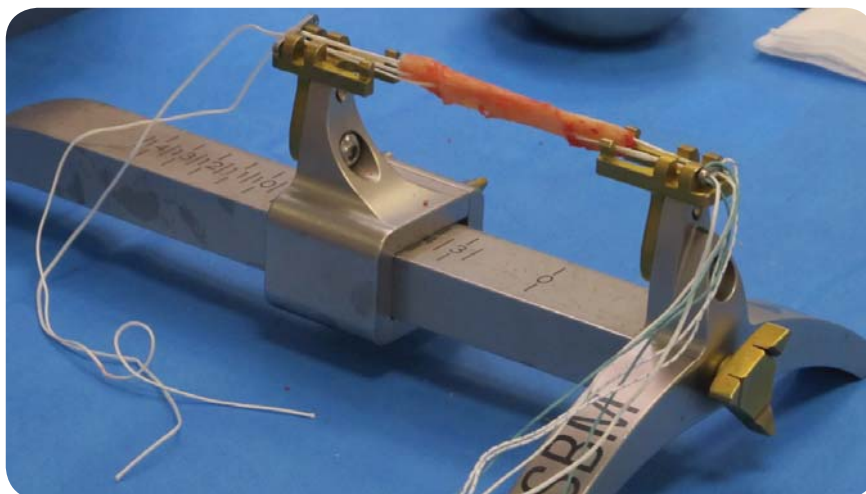
Once the temporary black loop enters the splice, pull harder while holding the rest of the construct until you hear a «click», and make the braided suture exit the button plate in order to make the second splice.

9



Adjust the size of the PULLUP® BTB loops.

10



Repeat the steps described above for making both splices in order to assemble the second PULLUP® BTB at the other end of the graft.

Install the graft on the GraftTech® and place it under slight manual tension.

4. IMPLANTING THE CONSTRUCT



Drilling the blind femoral tunnel

Position a \varnothing 2.5 mm eyelet pin and push it until it can be seen underneath the skin.

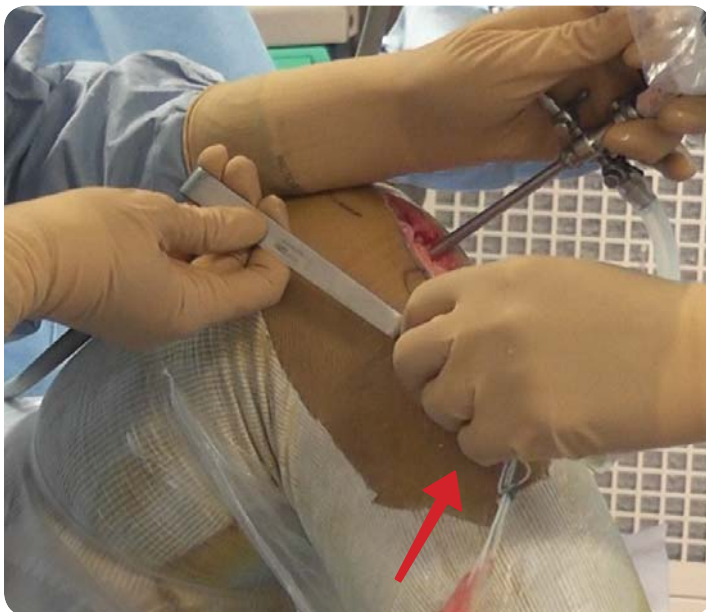
Drill a blind tunnel with a diameter and length that match the ones of the bone block and then drill on the guide pin with the \varnothing 4.5 mm cannulated drill bit until you drill through the external cortex.



Drilling the open tibial tunnel

Place the tibial aiming device, followed by the guide pin sleeve.

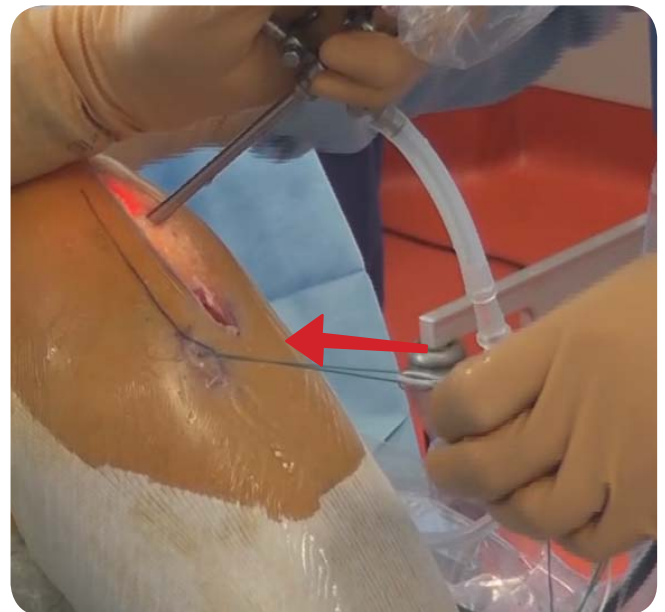
Drill at 4.5 mm, then drill to match the graft diameter.

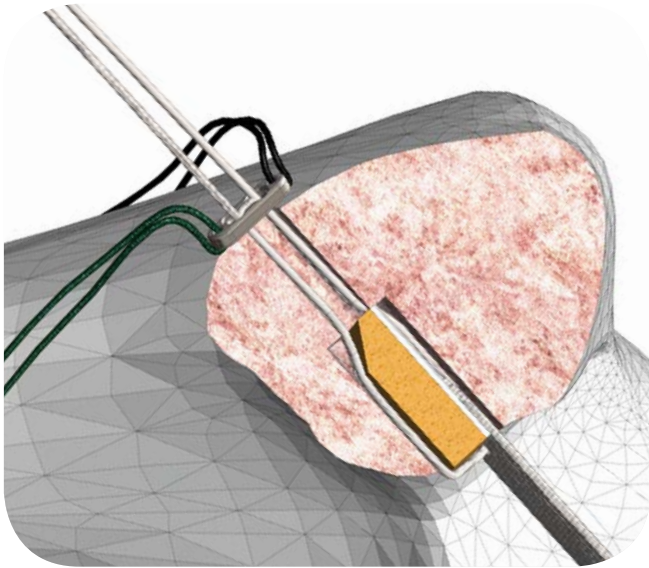


Traction

Use the eyelet pin to pass a relay suture through the femoral and tibial tunnels. Pass all the threads of the implant through the relay suture.

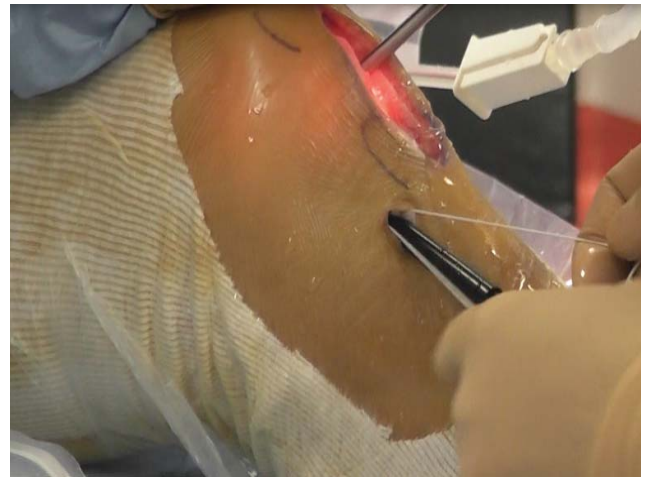
Use a relay suture to pull the graft and all the threads through the tibial and femoral tunnels until they traverse the femoral cortex.





Lock the fixation in place on the femoral end.

With the knee flexed, alternately pull on the white threads of the implant until they lock into place. Check that the construct is stable by pulling on the graft.



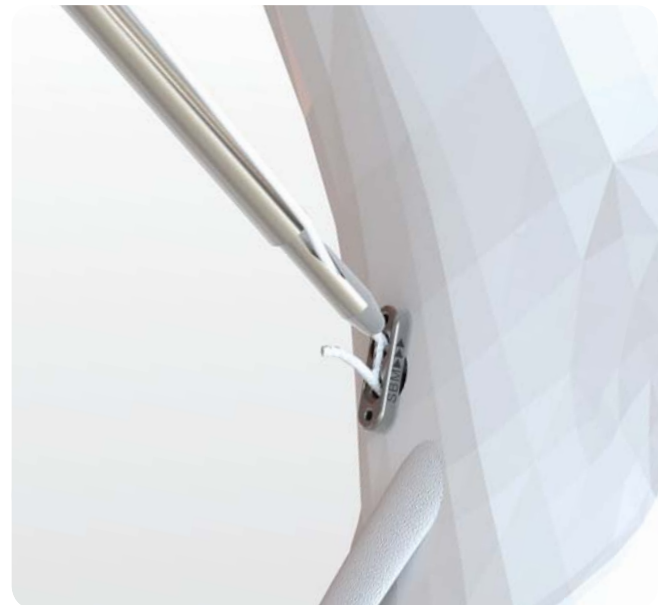
Lock the fixation in place on the tibial end.

With the knee flexed to 20°, alternately pull on the white threads of the implant until they lock into place. Check under arthroscopy that the plate is properly positioned, and repeat the operation if necessary.



Final tensioning

Fully extend the knee. Apply femoral and tibial tension to the graft by pulling on the braid sutures.



Eliminate the thread ends

Use the cutting pliers to cut off the white threads.

Designation

PULLUP® BTB adjustable juxtacortical fixation system for ligament reconstruction

Codes	Designation	Packaging
PULLUK1201	Pullup® BTB adjustable juxtacortical fixation system for ligament reconstruction in cortical tunnel= ø 4.5 mm	1
PULXLK1202	Pullup® XL BTB adjustable juxtacortical fixation system for ligament reconstruction in cortical tunnel diameter 5 to 10 mm	1

PULLUP® BTB adjustable juxtacortical fixation system for ligament reconstruction

Codes	Designation	Packaging
PULL000219	Cutting pliers	1
PULL000255	Ø 4.5 mm cannulated drill bit	1

GraftTech® preparation station

Codes	Designation	In the basket
PULL000217	GraftTech® preparation station mounted with brackets	1
PULLTAB001	GraftTech® preparation station stainless steel basket with silicones	1
PULLTAB002	GraftTech® preparation station stainless steel basket lid	1
PULLTAB000	GraftTech® preparation station base instrumentation set	1
PULL00G217	Bracket for GraftTech® holder	1
PULL00H217	Bracket for GraftTech® slider	1
CLE9006004	Mounting key - hex size 4 mm	1

Device and technique developed in collaboration with Dr. Philippe Colombet

Introduction to SBM

SBM (Science for BioMaterials) has been specialized in the design, manufacture and distribution of biomaterials for bone surgery since 1991. The company's priority is the development and optimization of medical devices which promote bone healing and human tissue replacement.

By completely controlling its technique in biomaterials, the company elaborates a range of innovative, 100% synthetic and absorbable systems along with specific ancillary instrumentation. Firmly established on the French domestic market, SBM has expanded its activities abroad in more than 40 countries for the sale and development of new products, in order to better meet the demands of the medical industry worldwide.



Science & Bio Materials



Carefully read the instructions for use that comes with the medical device or labeling provided to medical professionals. Document not legally binding - Can be modified without prior notice.
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