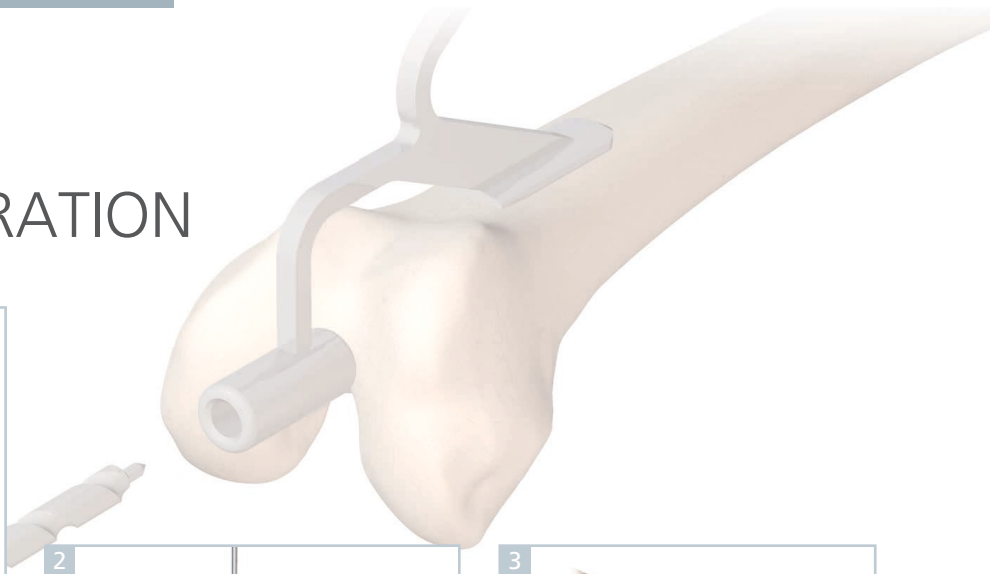
HiRit

SURGICAL TECHNIQUE

CERAVER

EXPERIENCE - INNOVATION

FEMORAL PREPARATION



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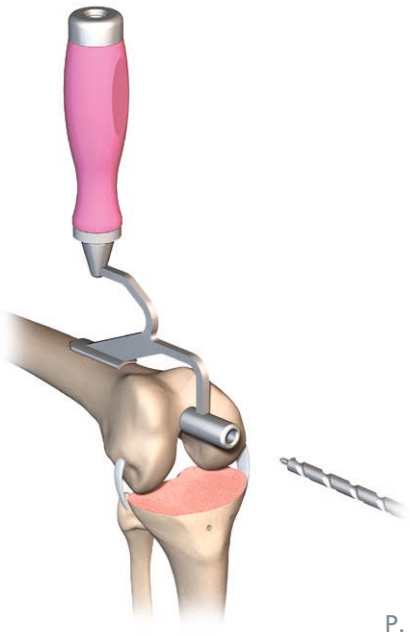
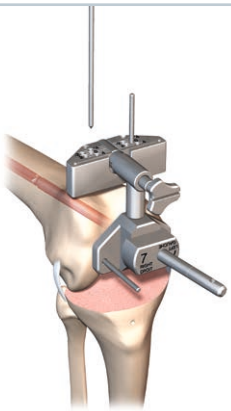


P. 12

Anterior cortical bone reference

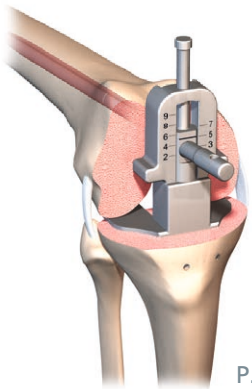
2



P. 13

Distal femoral resection

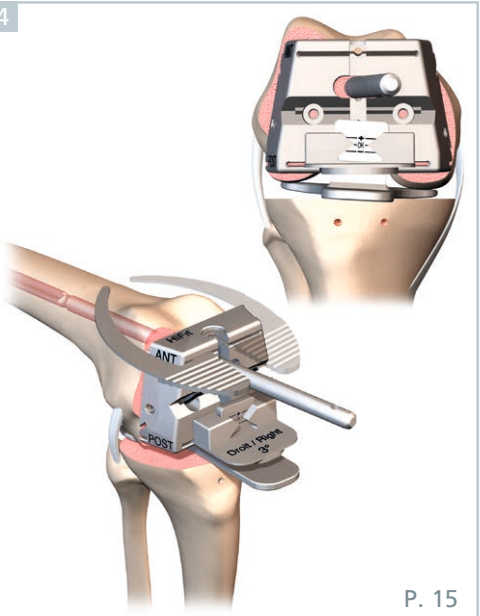
3



P. 14

Femoral sizing

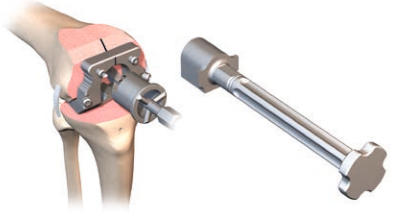
4



P. 15

Adjustment of external rotation
(0°, 3° or 5°) and 4-in-1 femoral resections

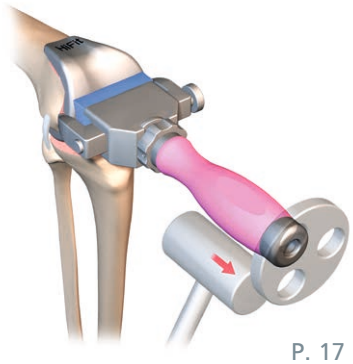
5



P. 17

Preparation of the femoral PS box

6

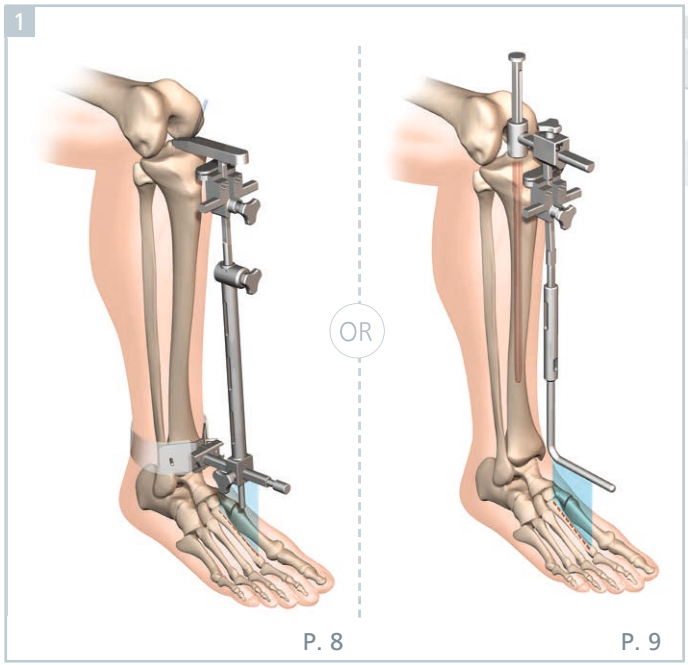


P. 17

Positionning of the femoral trial component

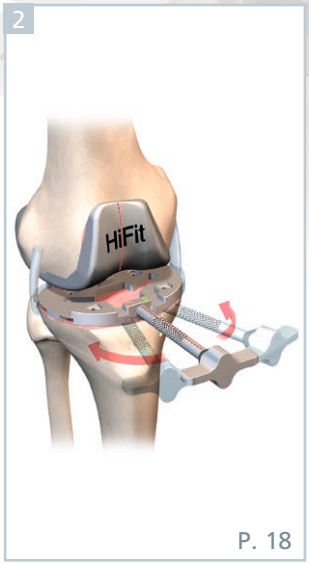
MAIN STEPS

TIBIAL PREPARATION

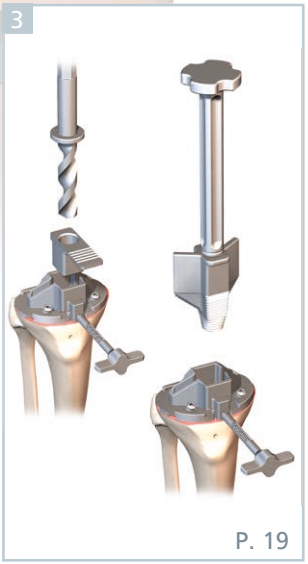


Extramedullary alignment guide

Intramedullary alignment guide

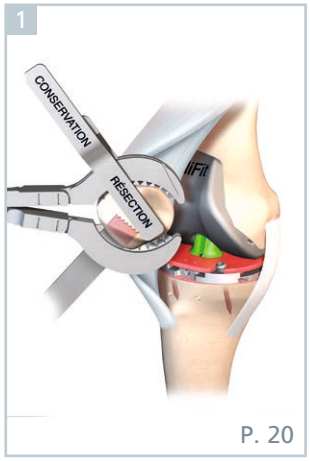


Size selection and orientation of the tibial baseplate

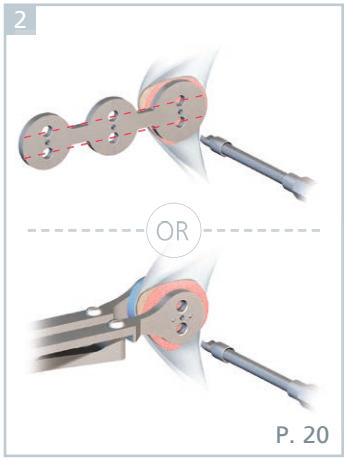


Preparation of keel and fins

PATELLAR PREPARATION

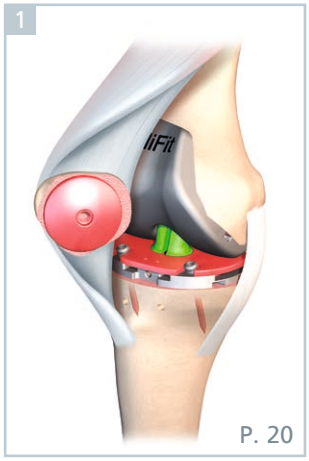


Patella resection



Pegs drilling

TRIALS AND IMPLANTATION



Trials

Implantation

A SIMPLE AND UNIVERSALLY-APPLICABLE SURGICAL TECHNIQUE

- One set of instruments:

  4 trays (independent cuts).

  One specific tray for extreme sizes including instruments for ligament balancing technique.

- Anterior cortical bone reference to avoid notching.

- Distal femoral cut first.

- 4-in-1 cutting guide for femoral cuts.

- Adjustable external rotation of the femoral component:

  To reduce mechanical stresses on the patellofemoral joint.

  To ensure a rectangular space in flexion with taut ligaments to avoid risk of lift-off.

- Wide interchangeability between femoral and tibial sizes.

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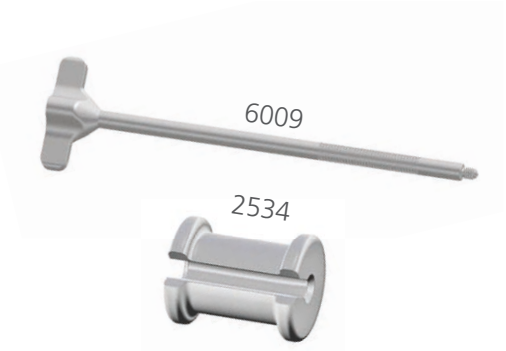
The HiFit PS offers different fixation systems which are designed to increase the stability and reliability of the ancillary instruments.

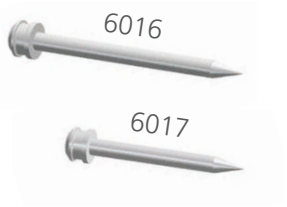
Standard system (drill and pin): the standard fixation system includes a drill bit (ref. 2985 or 2086) for drilling a hole before placing a pin Ø 3.2 mm (ref. 8028) on the mallet. This pin is then extracted using the vice grip (ref 8057).

Trigger system: the Ø 3.2 mm, round-ended pins (ref. 2039) are used with a trigger motor*, in which case the drilling step can be skipped. They are inserted and extracted by the motor.

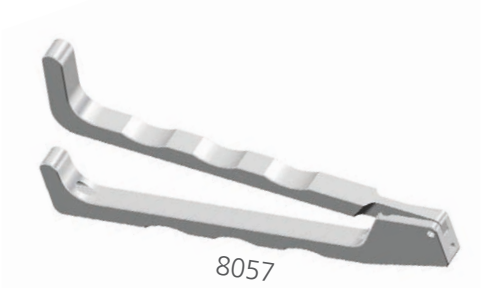
**It is necessary to have a specific motor attachment.*

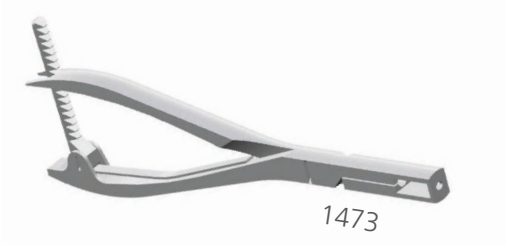
Large head nails for fixation in the trabecular bone. The headed nails (ref. 6016 and 6017) may be inserted with the mallet directly without drilling and extracted using the nail extractor (ref. 6009) and the lead (ref. 2534) or the headed nail extractor (ref. 1473).



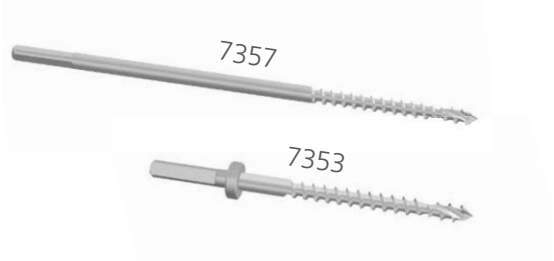


Extraction system





System using threaded pins*: allows motorised insertion and extraction with the motor adapter (ref. 2288). The threaded pins (ref. 7353 and 7357) allow the cutting blocks to be secured to the bone surfaces.



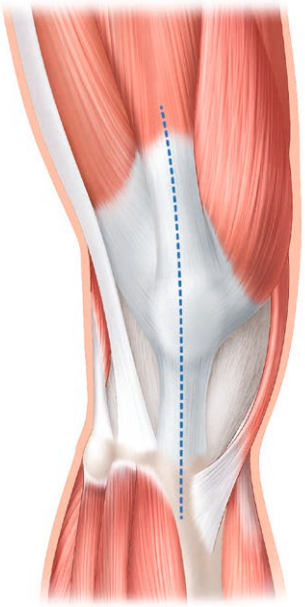
** Only upon request*

PARAPATELLAR MEDIAL APPROACHES

Median straight-line skin incision. If the patient is obese, the incision will be more lateral to facilitate patellar eversion.

■ PARAPATELLAR MEDIAL ARTHROTOMY

- At the junction of the quadriceps tendon and the vastus medialis,
- Leaving 5 to 10 mm of capsule at the medial border of the patella,
- Down to the medial border of the patellar tendon,
- Bending of the knee to 120° with lateral eversion of the patella.



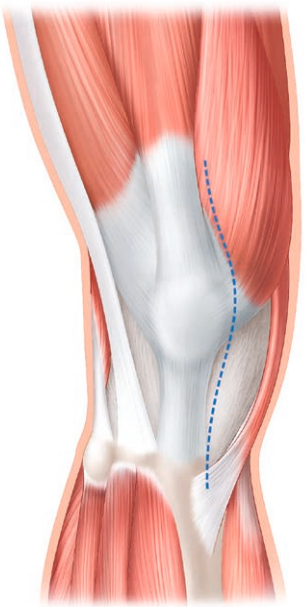
■ INTRA-ARTICULAR STEPS

MEDIAL

- Incision at menisco-capsular junction, as posterior as possible, without damaging the internal medial collateral ligament and excision of the anterior half of the medial meniscus,
- Subperiosteal tibial medial exposure down to the level of the tibial cut with release of the deep fibers of the medial collateral ligament (MCL).

CENTRAL

- On the femur: incision and detachment of the epithrochlear synovium on 2 to 3 cm to locate the anterior cortex of the distal femur.
- Partial excision of the fat pad on the deep face of the patellar tendon and complete detachment from the tibia.
- Excision of the cruciate ligaments, taking care not to damage the posterior neuro-vascular elements.



LATERAL

- Excision of the lateral meniscus, preserving the popliteus tendon and, if possible, the lateral genicular vessels,
- Subperiosteal tibial lateral exposure down to the level of the tibial cut,
- Placement of a Hohmann retractor on lateral tibial side while keeping the patella everted and therefore reducing the tension on the tibial insertion of the patellar tendon. Too much a tension on the patellar tendon may cause partial disinsertion of its fibres of the tibial tubercle. The insertion of the patellar tendon can be secured by inserting a headed nail into the tibial tubercle at the junction of its medial and central third.

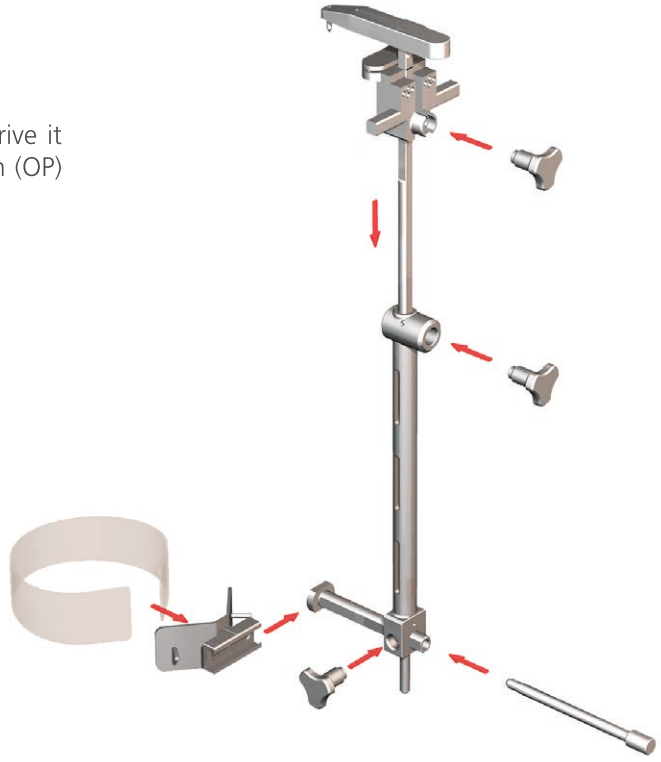
REMOVAL OF OSTEOPHYTES

- The removal of tibial and femoral osteophytes is essential for ligament balancing. This operation is helped by externally rotating the tibia.

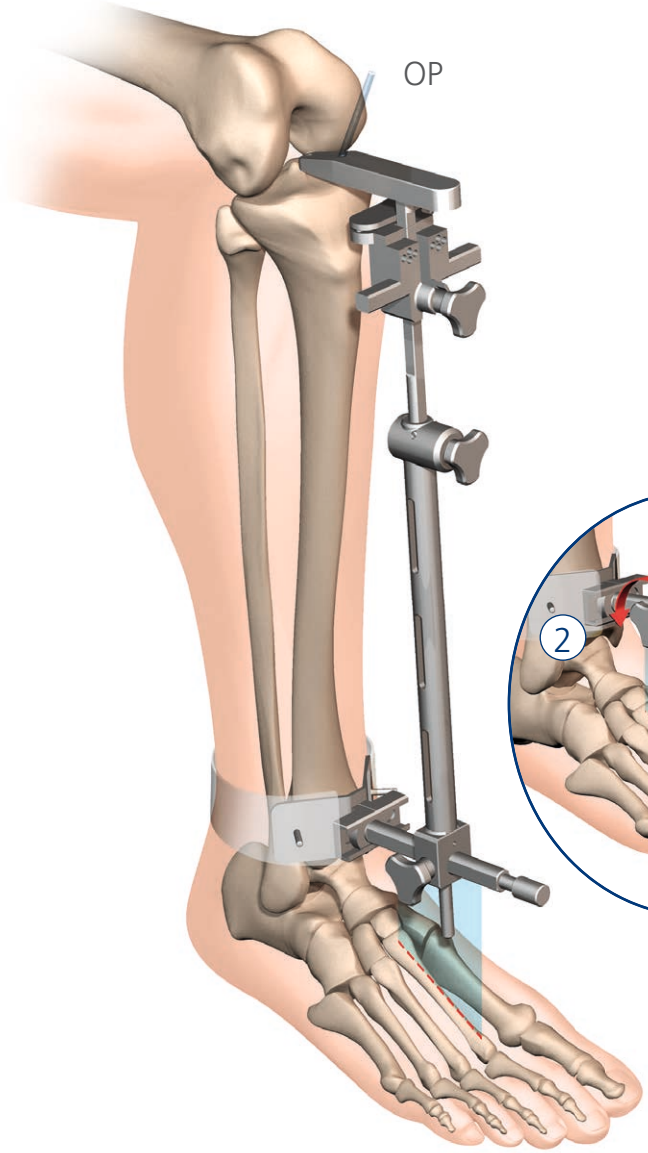
STEP 1

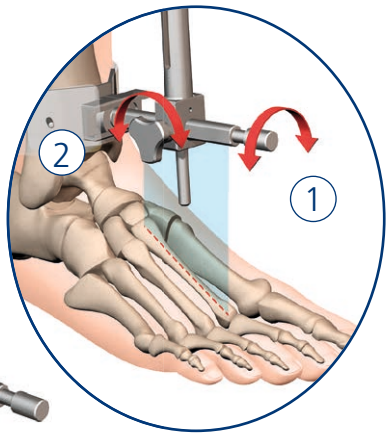
1/ OPTION 1: EXTRAMEDULLARY TIBIAL ALIGNMENT

- Assemble the entire extramedullary alignment system with the right or left internal tibial cutting guide depending on the knee being operated on.



- Centre the jig point between the tibial spines and then drive it in using the mallet (to improve the fixation, an oblique pin (OP) may be added).





- Adjust the varus/valgus (screw ①) and the posterior slope (screw ②).

Note

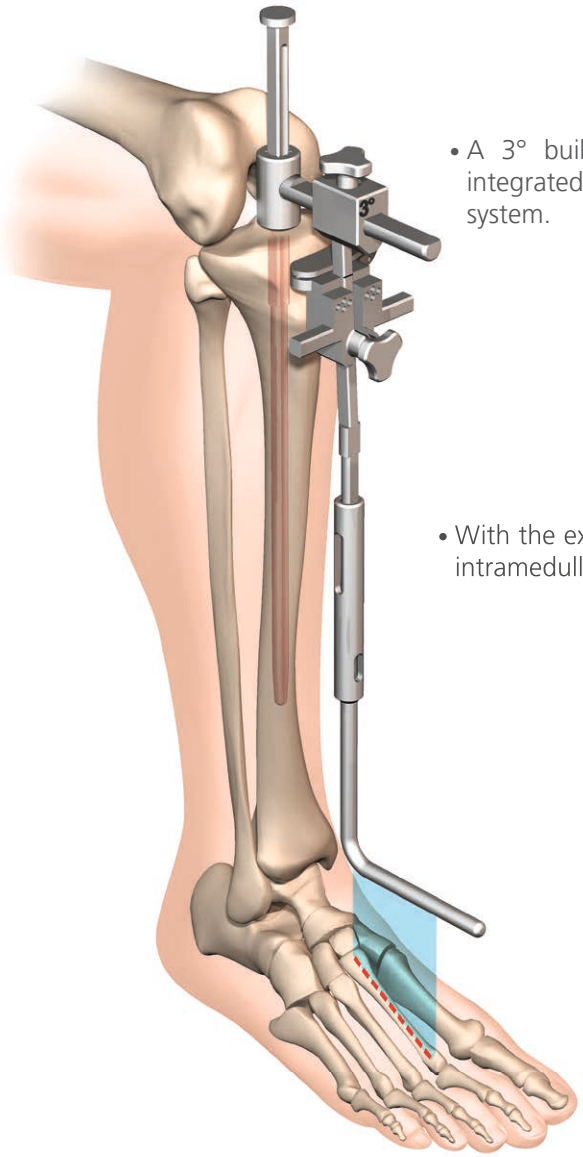
A tibial slope of 3° may be achieved using the rule of 1 proximal finger and 2 distal fingers near the pin or by using the sickle on the internal edge of the tibia.

STEP 1

1/ OPTION 2: INTRAMEDULLARY TIBIAL ALIGNMENT

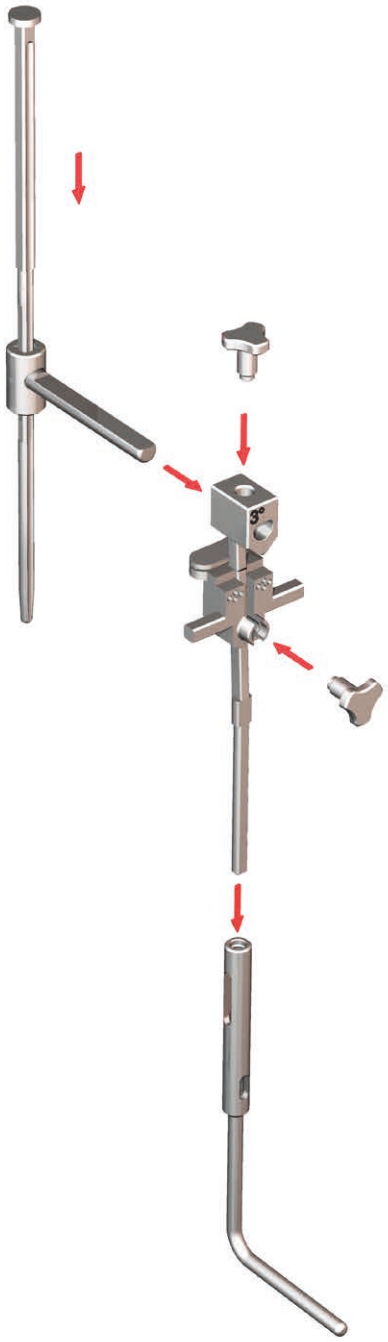
- With the Ø 10 mm drill make a hole between the tibial spines and at the junction of the anterior and middle thirds antero-posteriorly. The hole should be aligned with the anterior tibial crest for a straight tibia. The pre-op X-ray allows the centromedullary hole to be precise in relation to the curve of the excentration of the tibial diaphysis.

- Assemble the entire intramedullary alignment system with the right or left internal tibial cutting guide depending on the knee being operated on.



- A 3° build in tibial slope is integrated into the alignment system.

- With the extension shaft control the intramedullary axis.



Note

The square section of the intramedullary rod is not necessarily entirely impacted into the tibia however this impaction prevents the tibial rod from rotating.

STEP 2

2/ ADJUSTING THICKNESS OF THE TIBIAL RESECTION

- The standard thickness of tibial resection is 11 mm. This thickness is measured from the least worn side (usually the lateral plateau in varus knees).

Note

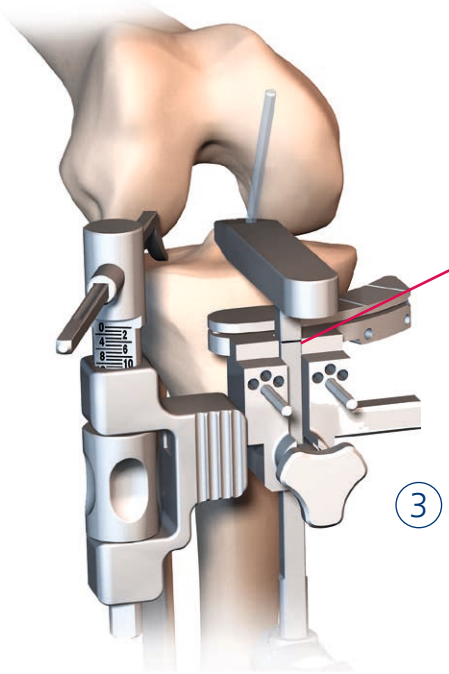
If the lateral plateau is not easy to reach, one can use the internal plateau as reference according to the pre-op planning on X-ray (on average resection of 7 mm).

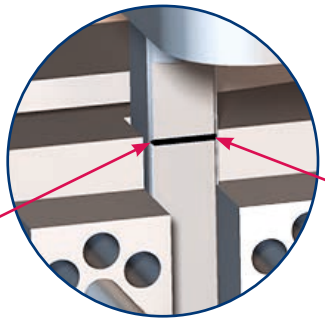
- Insert the tibial stylus on the square section of the tibial cutting guide (the stylus is in contact with the highest part of the lateral tibial plateau).

Note

In the event of severe wear, adjust the stylus at 2 mm and take the cut reference at the base of the most worn side.

Extramedullary alignment system

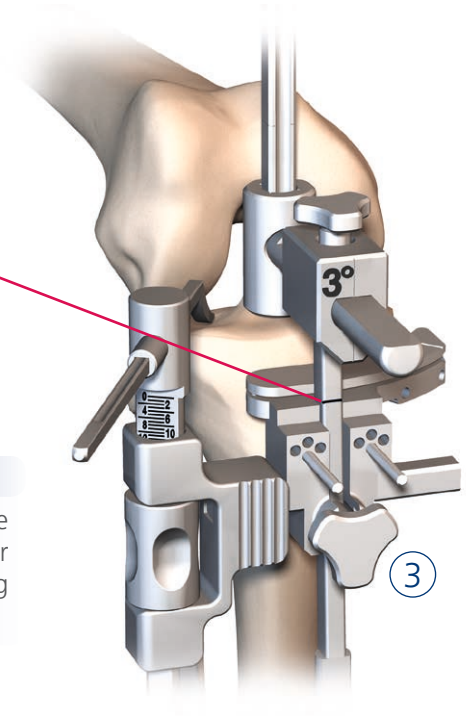




Note

A mark located 15 mm from the top of the tibial spines allows for pre-positionning of the tibial cutting guide.

Intramedullary alignment system



- Lock the position of the cutting guide (screw (3)).

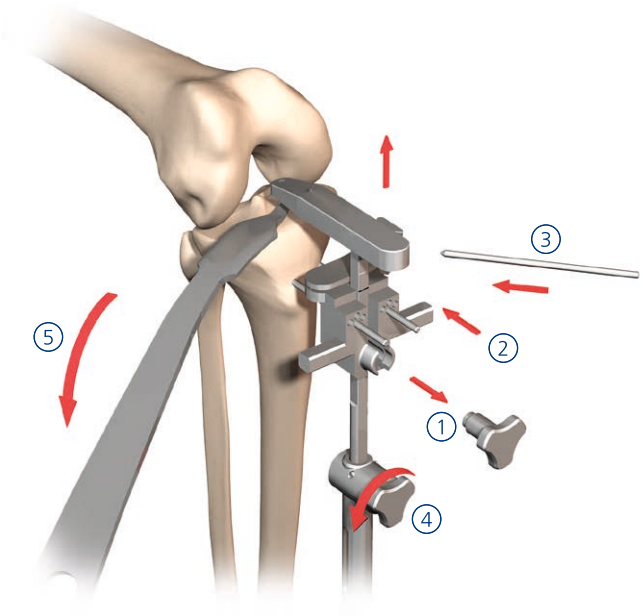
- Fix the cutting guide using the 2 lowest holes (this will allow a later tibial resection of an extra 2 or 4 mm more).

Note

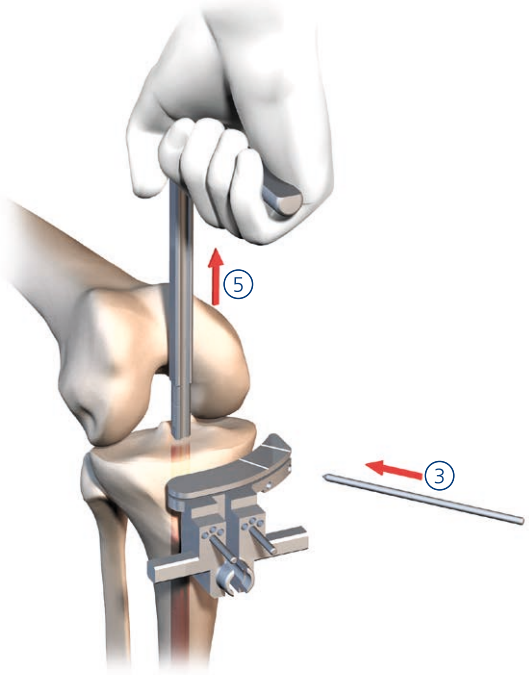
The sickle enables the surgeon to see the level of cut on the medial compartment.

STEP 3

3/ PERFORMING OUT THE TIBIAL RESECTION

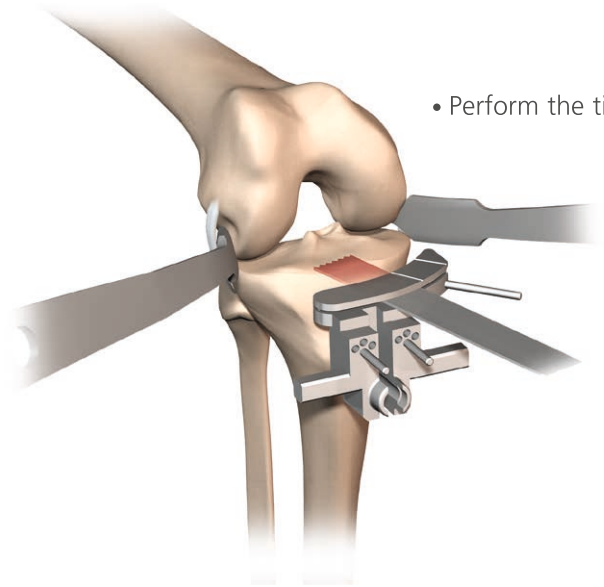


Extramedullary alignment system



Intramedullary alignment system

- Unscrew (1) and slide the cutting guide towards the tibia (2) to bring it into contact with the bone.
- Insert one or 2 cross-pins in order to maximize the stability of the guide ((3)).
- Remove the extra- or intramedullary alignment system ((4) and (5)).



- Perform the tibial resection, taking care to protect the collateral ligaments.

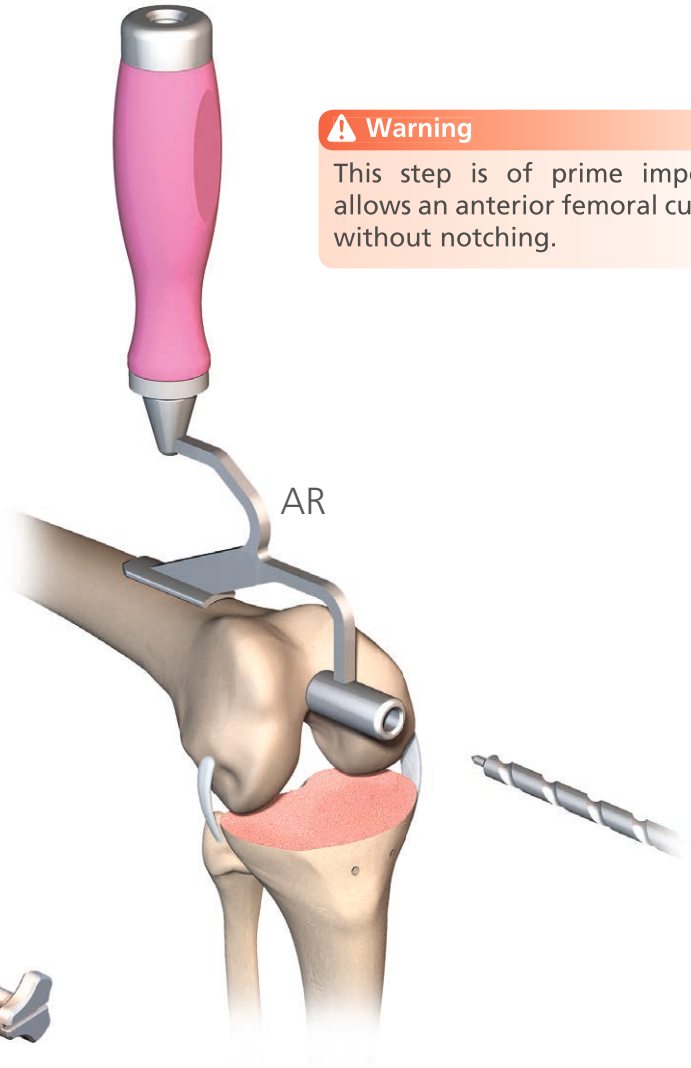
Note

By leaving the 2 parallel pins in place, it is possible to later perform an extra tibial resection of 2 mm or 4 mm.

STEP 1

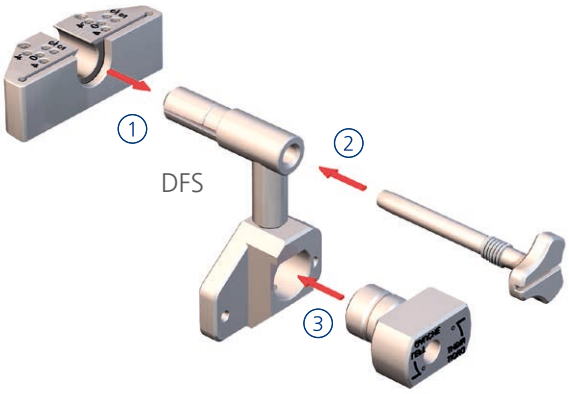
1/ ANTERIOR CORTICAL BONE REFERENCE

- Position the anterior reference guide (AR) at the contact of the antero-external cortical (shaft perpendicular to the thigh). The spatula must be flat on the bone.
- Drill the centromedullary hole using the Ø 7.5 mm drill.
- Insert the centromedullary rod.



Warning

This step is of prime importance and allows an anterior femoral cut to be made without notching.



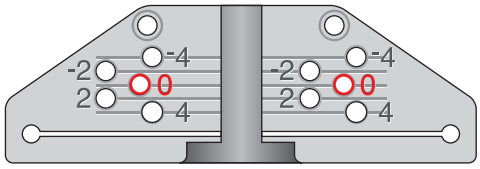
- Assemble the distal femoral cutting guide (1) on the distal support connection, fastening it with central screw (2) (when inserted to the stop, the cut will resect 10 mm from the longest distal condyle).
- Assemble the angular correctional guide (3) (3°, 5°, 7°, or 9°) on the distal femoral support connection (DFS).
- Slide the assembly on the centromedullary shaft until it makes contact with the condyles. It must be ensured that no osteophyte prevents distal contact.

STEP 2

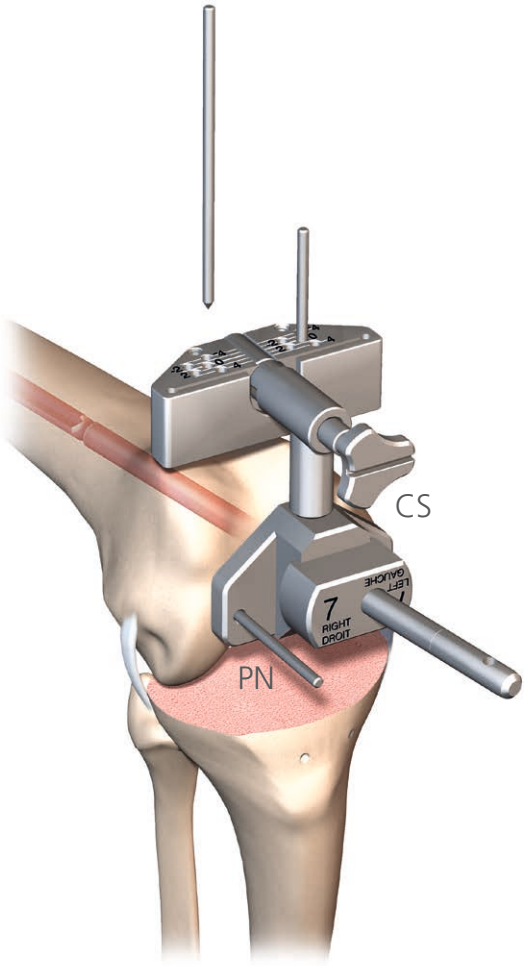
2/ FIXING THE GUIDE AND DISTAL FEMORAL RESECTION

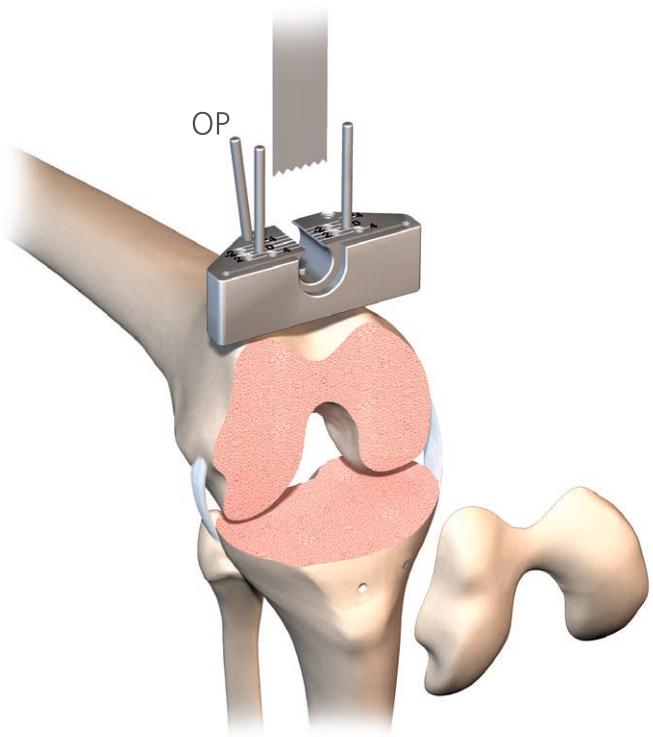
- Stabilise distal femoral support guide with a pin (PN) (in neutral rotation parallel to tibial resection or posterior condylar axis).

- Fix the distal femoral cutting guide using 2 pins of Ø 3.2 mm in the 2 holes marked "0". A later extra resection of 2 mm or 4 mm is then possible.



- Remove the centromedullary rod and release the central screw (CS) to extract the distal femoral support guide.





- Slide down the cutting guide onto cortical bone, and stabilise it using an oblique pin (OP).

- Perform the distal femoral cut (10 mm being the standard resection).

Note

For a standard anatomy, the distal femoral cut achieved is in the shape of a butterfly.

STEP 3

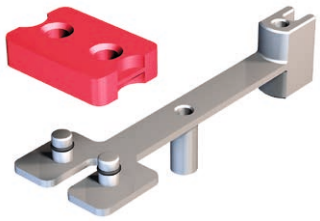
3/ VERIFICATIONS AND MEASUREMENTS

■ CHECKING MECHANICAL AXIS AND MEASURING EXTENSION SPACE

- Extend the knee and insert the spacer block support mounted with the thinnest colour block into the femoral-tibial space.
- Ensure that the ligament balance and tension are correct (no flessum and full extension) by increasing the thickness of the colour block.
- Ensure that the lower limb is straight by using the alignment rods, which can be inserted into the top of the palette.

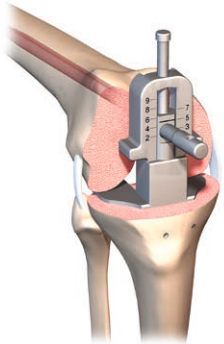
Note

If the space in extension is too small and causes a flessum with the thinnest block, check the slope of the tibial cut. If the slope is good, redo the tibial cut or the distal femoral cut by 2 mm.



Block colours	PE thicknesses
	7 mm
	9 mm
	11 mm
	13 mm
	15 mm
	17 mm

■ CHOICE OF FEMORAL SIZE



- Place the size indicator on the intramedullary rod.
- Read the recommended size while the 2 posterior spatulas are both against medial and lateral condyles.

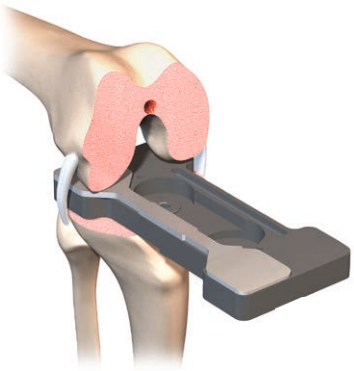
■ ADJUSTING EXTERNAL ROTATION

Compliance with the external rotation of the femoral component:

- reduces the stresses on the patellofemoral joint (to optimise the femoro patellar tracking).
- ensures a rectangular space in flexion, to avoid lift-off.

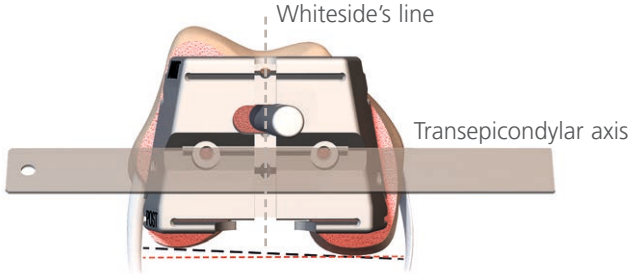
To choose the rotation to apply to the femoral component, there are several solutions:

- Automatic external rotation of 0°, 3° or 5° to the line of the posterior condyles.
- By ligament tension: knee at 90°, place the black wedge which stabilize the knee, and place the metal wedge externally to fill in the residual laxity. The thickness of the metal wedge gives the external rotation of 1 mm which is equivalent to 1°.



Note

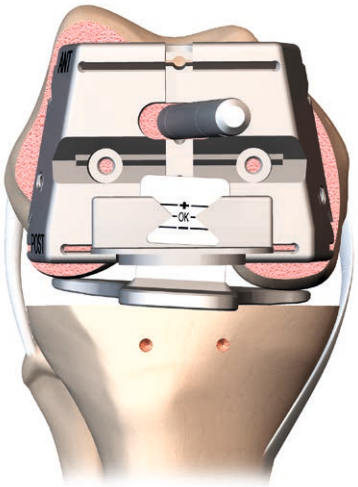
It is also possible to use bone references (epicondyles or Whiteside's line) to perform the external rotation of the femoral component.
The measuring blade ref. 1102 may be used to visualise the alignment.



STEP 4

4/ POSITIONING THE 4-IN-1 FEMORAL CUTTING BLOCK

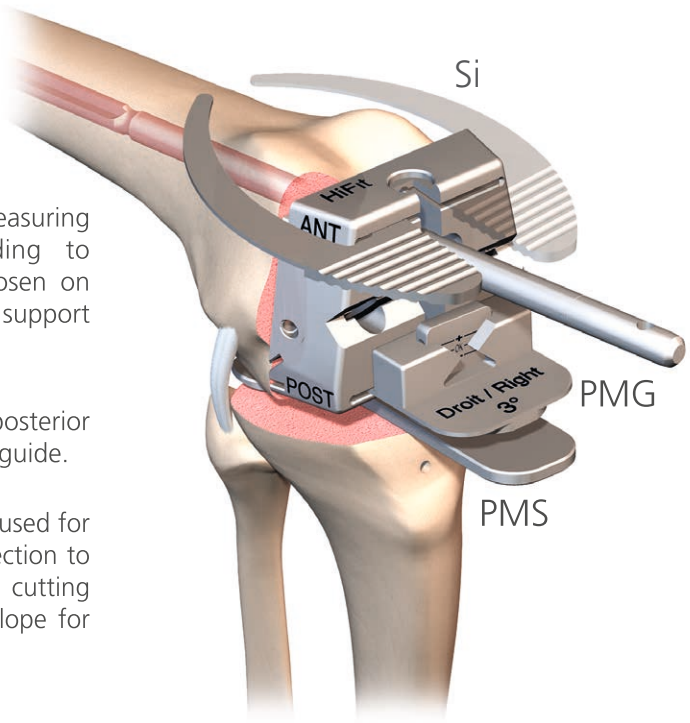
• Slide the 4-in-1 cutting guide of the pre-selected size onto the intramedullary rod, until contact with the distal cut.



• Fit the femoral posterior measuring gap (PMG) corresponding to the external rotation chosen on the posterior measuring support (PMS).

• Insert (PMG) into the posterior slot of the 4-in-1 cutting guide.

• The sickle (Si) can also be used for checking the anterior resection to avoid notching. The 4-in-1 cutting guide has a build in 6° slope for the anterior resection.

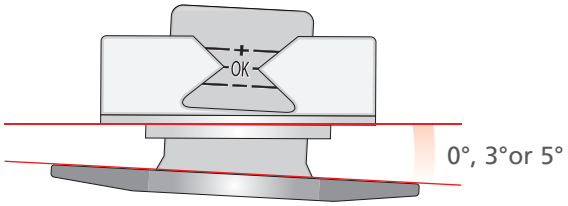


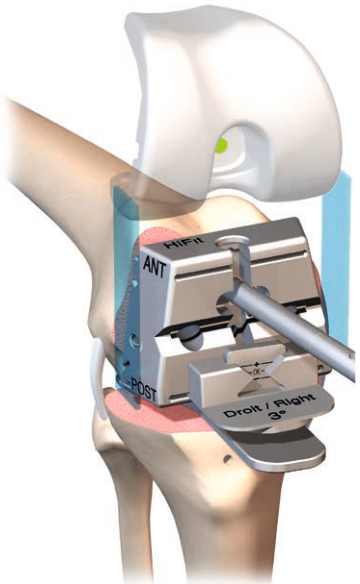
• Cursor position:

— + — : the posterior resections are 2.5 mm greater than the prosthetic thickness. It is advised to select the cutting guide one size up, whilst checking that the ML dimension remains compatible with the size of the native femur.

— OK— : the size is appropriate.

— - — : the posterior resection are insufficient. It is recommended to select the cutting guide one size down.





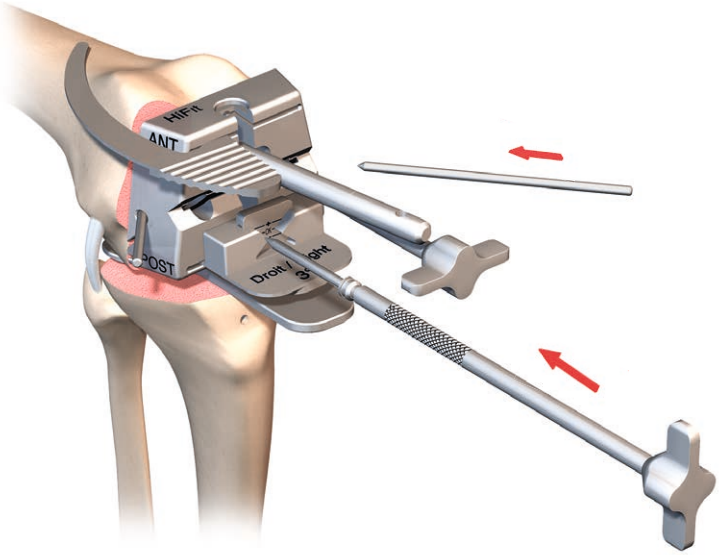
Note

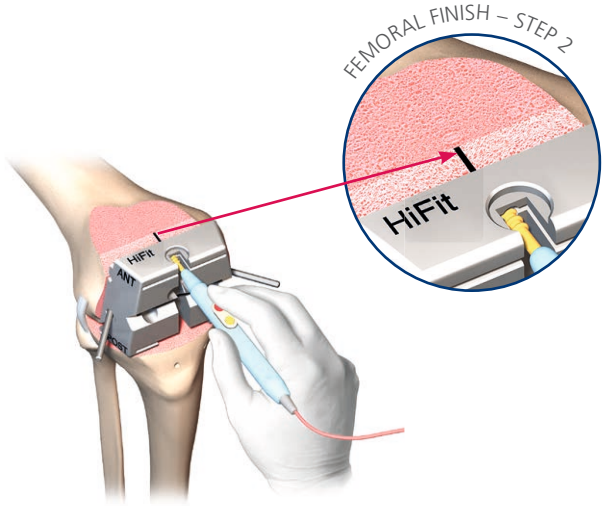
It is possible to check the medio-lateral dimension of the femoral component with the 4-in-1 cutting guide because ML of the cutting guide is equal to the ML of the posterior condyles of the implant.

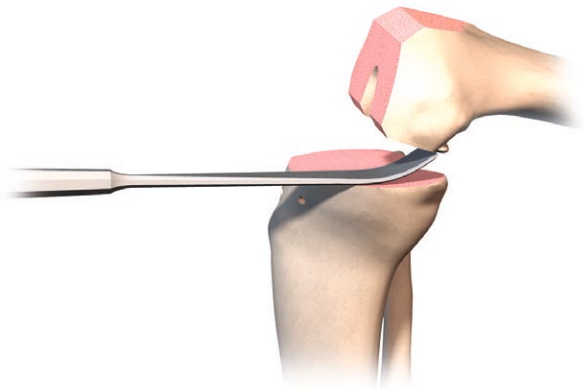
STEP 5

5/ FIXATION AND PERFORMING AP RESECTIONS AND CHAMFERS

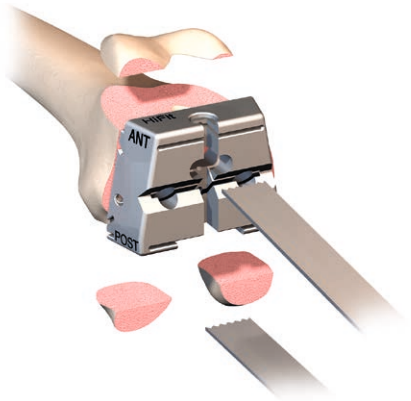
- Fix the 4-in-1 cutting guide onto the distal resection. Ensure that is in perfect contact with the distal femoral resection when inserting the oblique pins.

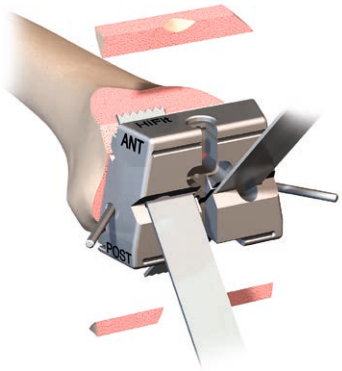






- Perform the anterior-posterior cuts followed by the two chamfers.





Note

In order to ensure the future ML positioning of the femoral component, it is possible to mark the position of the 4-in-1 with an electrosurgical device. This position can be useful in step 2 of the femoral finish (page 17).

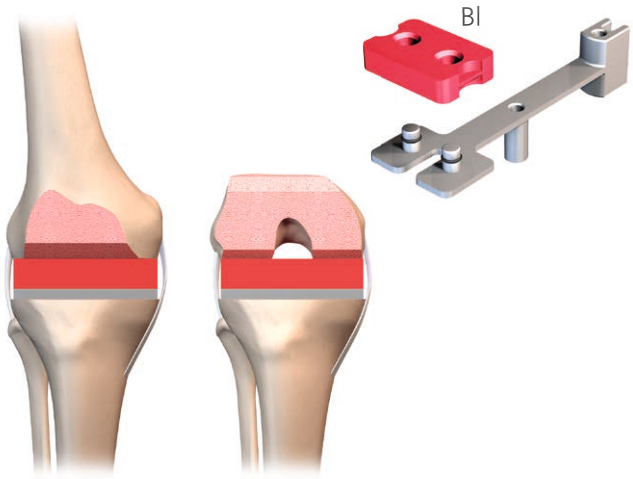
Note

It is advised to remove the posterior osteophytes using a curved osteotome.

STEPS 1, 2 and 3

1/ VERIFICATION OF SPACES

- Once all the resections have been made, test the extension and flexion gaps, starting with the thinnest colored spacer block (Bl) mounted on its support.

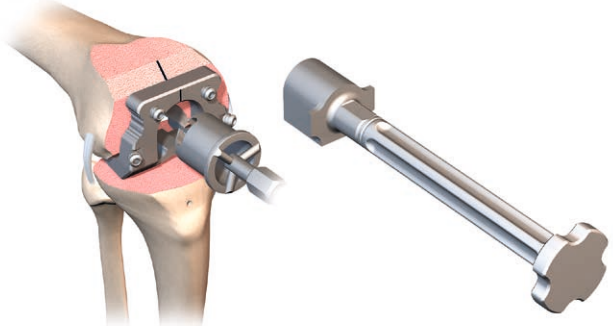


■ OUTCOME:

- Extension < flexion (extension too tight): redo the distal resection, redo the chamfers and increase the thickness of the PE insert.
- Flexion < extension (flexion too tight): redo the posterior resection and the posterior chamfer (the anterior resection remains the same) while downsizing the femoral component.
- The colour of the block inserted which enables the knee to be balanced in flexion and extension corresponds to thickness of the tibial PE.

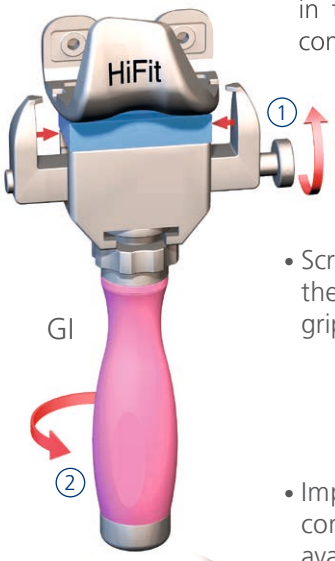
2/ PREPARATION OF PS BOX

- Select the carter box guide according to the size of the femoral component selected. Fix it on the distal resection centered on the mark made previously with the electrosurgical device. Ream and then impact the gouge in accordance with the size of the femoral component.

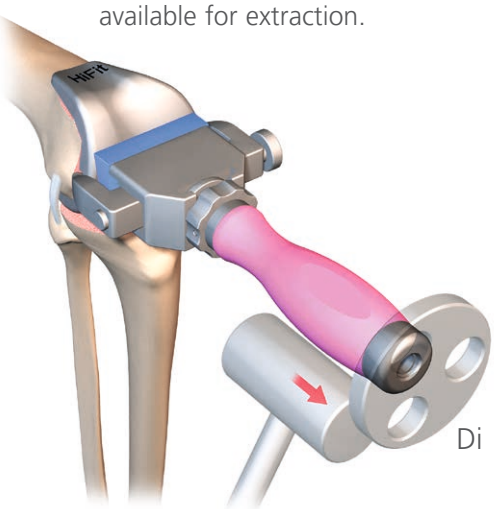


3/ POSITIONNING OF THE FEMORAL TRIAL COMPONENT

- Place the femoral trial component into the gripper-impactor (Gl).



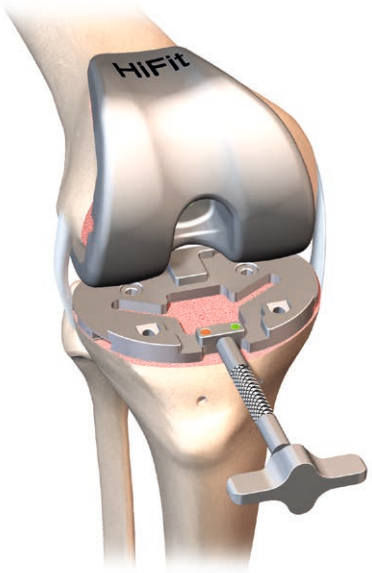
- Screw (1) until the jaws engage in the grooves of the femoral component without tightening.
- Screw the handle (2) to fasten the component on to the gripper impactor.
- Impact the trial femoral component. A disc (Di) is available for extraction.



- To disassemble the gripper-impactor, unscrew the handle first (2) and then the screw (1).

STEP 1

1/ SIZE SELECTION AND ORIENTATION OF THE TIBIAL BASEPLATE

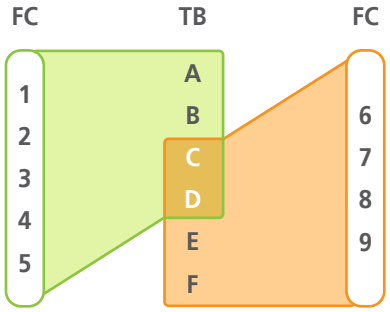


- Choose the tibial trial baseplate (sizes A to F) which offers the best coverage of the tibial surface. Avoid soft tissue posterolateral conflict.

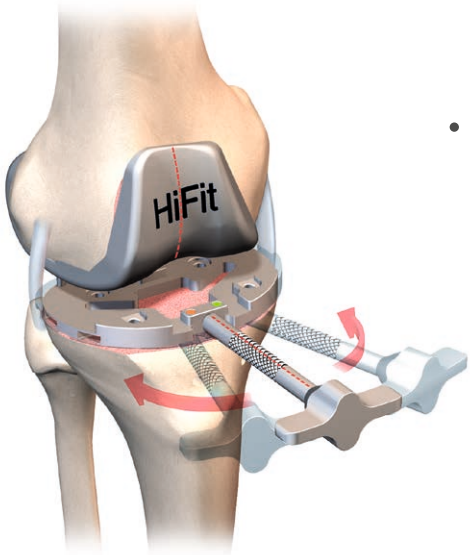
Note

The choice of size of baseplate is guided by the size of the femoral component (see compatibility table below).

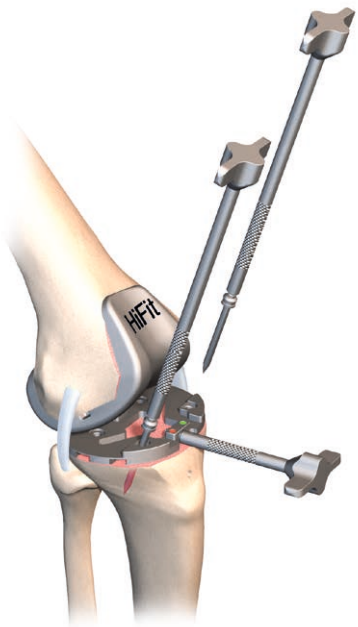
- Ensure compatibility between the sizes of the tibial baseplate and the femoral component.



FC = Femoral component.
TB = Tibial baseplate



- Check the rotation of the baseplate: the grip shaft must be projected on to the medial 1/3 of the patellar tendon attachment. Knee in extension, the grip shaft must be aligned with the trochlear groove.



- Fix the baseplate with 2 short headed nails of 3.2 mm in diameter (ref. 6017) using the anterior holes.

STEPS 2 and 3

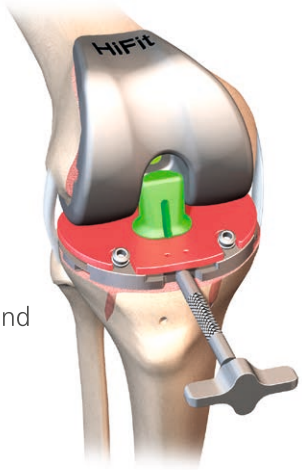
2/ POSITIONNING THE TRIAL COMPONENTS

- Mount the trial peg on the insert of the colour validated when checking the spaces in extension (step 1 - femoral finish page 17). The colour of the peg must correspond to the colour indicated at the bottom of the PS box of the femoral trial component.

Femoral component size 1 to 5
Femoral component size 6 to 9

- Insert the assembly (trial PE + baseplate) into the joint.

- Check ligament balancing and knee stability in flexion and extension.



3/ PREPARATION OF KEEL AND FINS

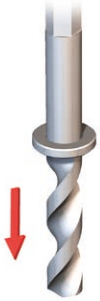
- Remove the trial insert and, if necessary, the femoral trial component.

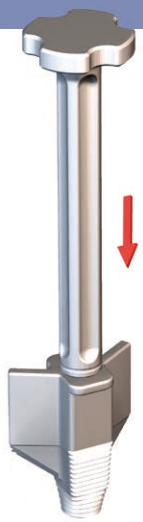
Note

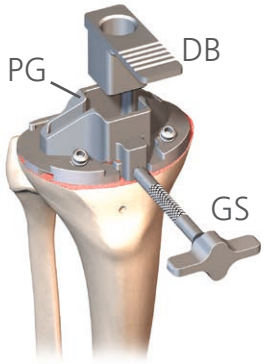
In order to secure the fixation, 2 nail heads (or Ø 3.2 mm pins) can be added.

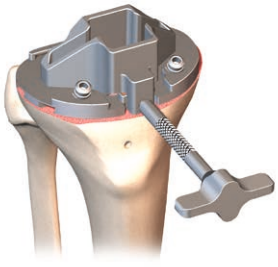
- Fix the preparation guide of the tibia (PG) with the gripper shaft (GS).

- Prepare the keel shape for the tibial baseplate with the drill bushing (DB) and the Ø 14 mm drill ref. 8278.









Note

If a tibial extension needs to be implanted, use the Ø 14 mm long drill ref. 8238.

- Remove the drill bushing.

- Complete the preparation of the keel and the fins of the baseplate using the correct size of fin punch (size A-B-C or size D-E-F).

Note

In case of dense or sclerotic bone, it is preferable to prepare the way for the fin punch by using bone scissors or a saw.

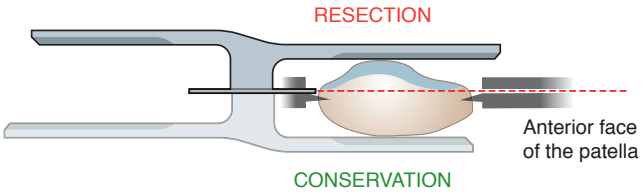
STEPS 1, 2 and 3

1/ RESECTION OF PATELLA

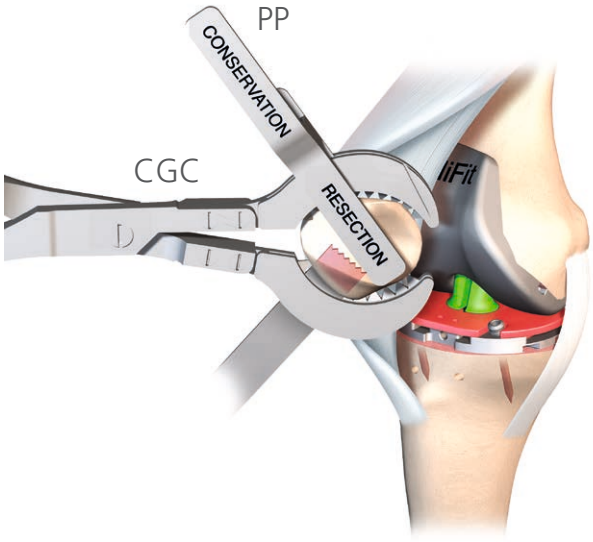
- Position the cutting guide clamp (CGC) on the patella. In order to determine the thickness of the resection, the patellar probe (PP) is positioned in the cutting slot.

The patellar probe can control 2 parameters:

- Resection: allows to define the thickness of resection (9 mm) to be performed.
- Conservation: allows to define a thickness of patella (13 mm) to be kept.

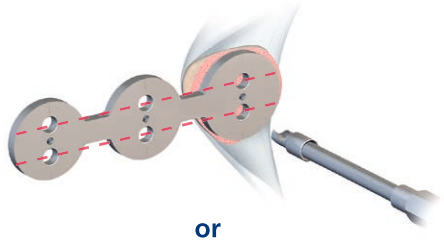


- Perform the patellar cut with an oscillating saw.

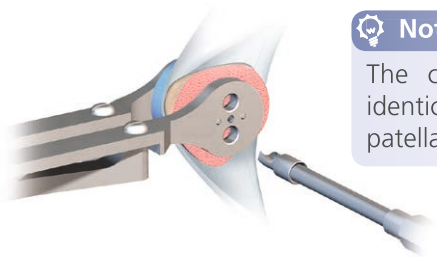


2/ DRILLING FIXATION HOLES

- Use the patellar template to determine the diameter of the patellar button and to mark the position of the centre of the patella.
- Centre the drilling guide clamp on the patella matching the centre mark. The two holes are oriented in the axis of the extensor apparatus.
- Make the two attachment holes in the patella with the Ø 6 mm drill.



or

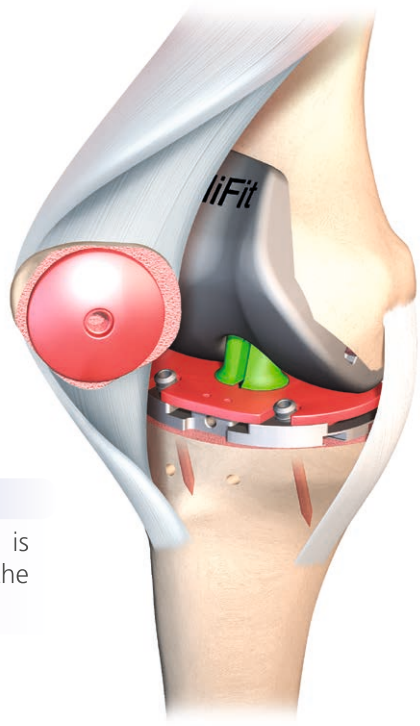


Note

The centre distance between the pins is identical irrespective of the diameter of the patellar component used.

3/ TRIALS

- Carry out a stability test on the patella in flexion/ extension with the trial components in place. In case of subluxation, perform a patellar lateral release.



STEPS 1, 2 and 3

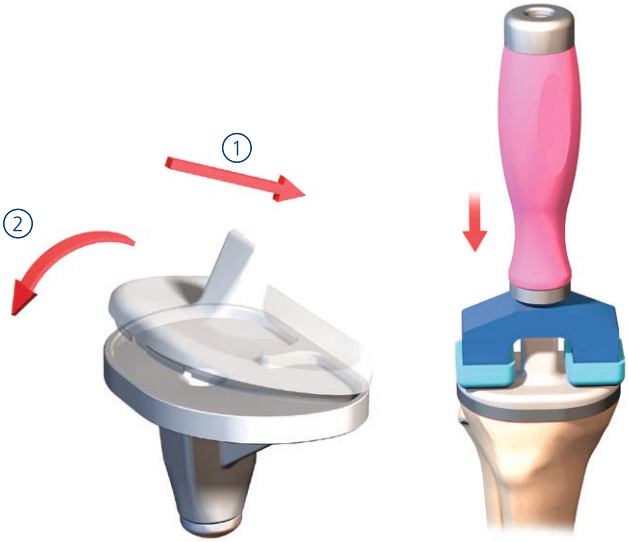
1/ TIBIAL IMPLANT

Note: Option tibial extension

As regards the option of using an extension, it is necessary to use instrumentation ref. 16521 or ref. 16518. Proceed according to these steps:

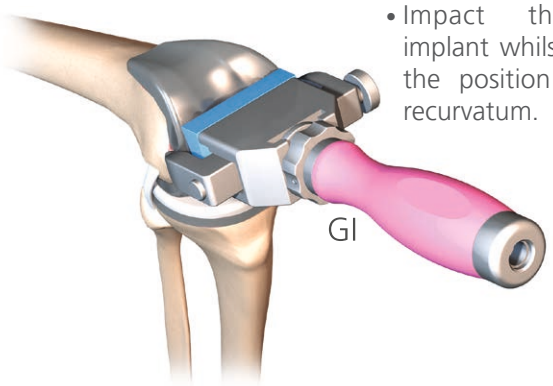
1. Unscrew the plug located at the end of the keel.
2. Screw the screw into the baseplate until it goes into a freewheeling condition.
3. Insert the extension into the cone and screw it into place.
4. When the extension is solid, then impact.
5. Finish screwing

- Place the knee in maximum flexion, with the tibia in anterior translation.
- Implant first the tibial baseplate, whose polyethylene insert will have been clipped previously. This insert is the same size as the tibial baseplate.



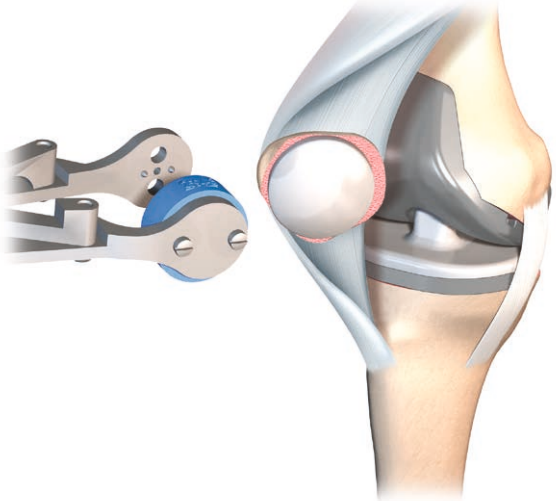
2/ FEMORAL IMPLANT

- Mount the femoral implant on the gripper impactor (GI) as described in step 3 - femoral finish (page 17).
- Knee in maximum flexion and tibia in anterior translation: position the femoral implant according to the cuts. Once engaged, place the tibia at 90° so that the tibial peg is in the PS box.
- Impact the femoral implant whilst monitoring the position in flessum/ recurvatum.



3/ PATELLAR IMPLANT

- Implant the patellar component using the patellar clamp.



LIGAMENT BALANCING TECHNIQUE

The aim of this technique is to position the 4-in-1 femoral cutting block in such a way as to achieve a femoral-tibial space in flexion, with taut ligaments, identical to that which was achieved in extension.

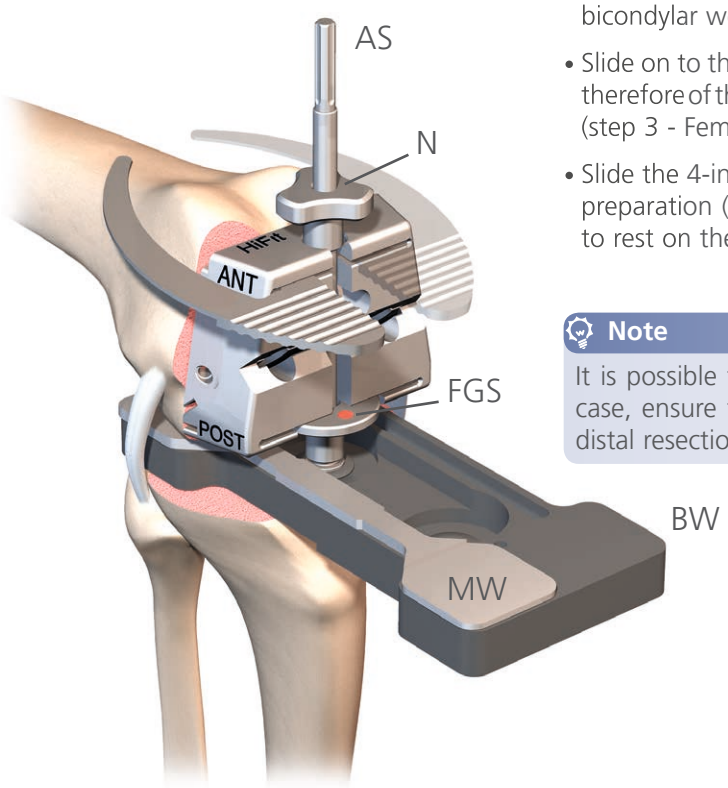
This technique requires the use of additional instrumentation ref. 16502.

- Insert, into the bended joint at 90°, a black bicondylar balancing wedge (BW) whose thickness is sufficient to stabilise the joint from the tightest side (medial side). A laxity remains on the lateral side. Insert a further metal wedge (MW) (thickness 2 to 9 mm) to perfectly stabilise the joint in flexion.

- Test the stability by moving the leg in varus/valgus, with the knee bent at 90°. The space between the posterior condyles and the wedges must be 0 to 2 mm depending on how tight the knee needs to be.

Note

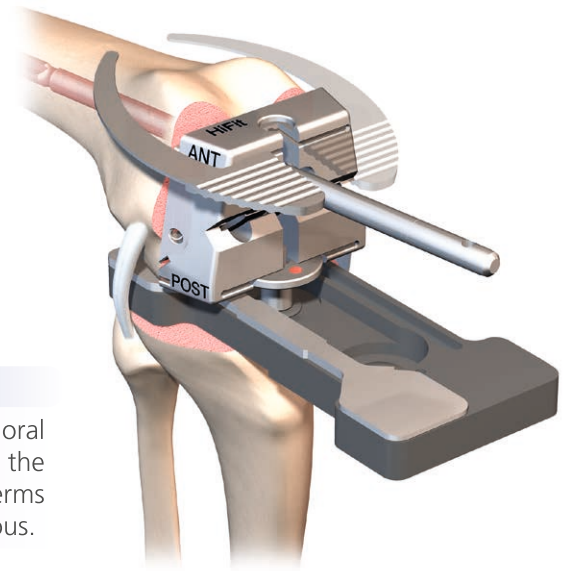
The value in millimetres noted on the additional metallic wedge is close to the value of the external rotation in degrees given to the femoral component in relation to the line of the posterior condyles.



- Screw the alignment shaft (AS) of the 4-in-1 cutting guide onto the bicondylar wedge.
- Slide on to this shaft the flexion gap spacer (FGS) of the same colour and therefore of the same thickness of PE as the colour block chosen in extension (step 3 - Femoral preparation page 14).
- Slide the 4-in-1 cutting guide of the size determined in step 3 - Femoral preparation (page 14) onto the alignment shaft. The guide must come to rest on the spacer.

Note

It is possible to secure the 4-in-1 cutting guide using a nut (N). In this case, ensure that the 4-in-1 cutting guide makes good contact on the distal resection.



Note

In the case of anterior notching for the selected femoral size, pin ref. 7087, may be used in combination with the intramedullary rod. The compromise is then made in terms of the posterior resections which are slightly more generous.

1/ VARUS KNEE

■ APPROACHES

Use the medial parapatellar approach.

■ ADJUSTING RESECTIONS

For the tibial cut, a cut of 2 mm under the most worn point of the medial compartment can be made whilst monitoring the lateral side (11 mm). The aim is to keep a maximum of bone whilst ensuring a satisfactory cut in terms of the stability of the tibial implant.

Note

This motion must be carried out during the tibial cut (Step 1 - Tibial preparation page 10).

■ CAPSULE AND LIGAMENTS RELEASE

If the varus cannot be reduced: when the soft parts are released in extension, attention should firstly be paid to the postero-oblique bundle of the internal collateral ligament and the insertion of the semi-membranous and then the postero medial capsule.

Note

This action must be carried out when determining the femoral-tibial space in extension (Step 3 - Femoral preparation page 14).

2/ FLESSUM KNEE

If the flessum is not due to the presence of posterior osteophytes or an insufficient posterior slope, then it is advisable to limit the posterior obstruction of the femur so as not to soften the posterior hulls during extension. A distal femoral cut of +2 mm will reduce the flessum.

■ ADJUSTING RESECTIONS

For the posterior femoral cut, ensure that the thickness of the cut of the posterior condyles is greater than or equal to the thickness of the prosthetic condyles (10 mm) before performing the anterior femoral cut. If the thickness of the cut is insufficient, shift the 4-in-1 cutting guide forward by 2 mm and check the choice of size of the femoral component.

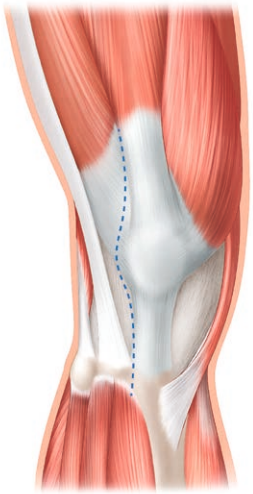
Note

This action must be carried out during the anterior and posterior cuts (Step 4 - Femoral preparation page 15).

3/ VALGUS KNEE

■ APPROACHES

If the valgus can be reduced or is moderate (8/10°), the medial parapatellar approach is used.



In case of a significant, non-reducible valgus (> 10°), which necessitates a release of the lateral soft parts on the side of the concavity, it is recommended to use the lateral parapetellar approach (Keblish approach) with or without raising the tibial tubercle.
In this case:

- Keep a pedicled menisco-greasy thread at the back (geniculate artery inferolateral),
- Sublux inside the extensor device (without eversing the patella), by partial lateral decortication of the tibial tubercle.

■ ADJUSTING RESECTIONS

For the tibial cut, a cut of 9 mm under the most worn point of the external compartment can be made. Knees in valgus often show greater laxity.

Note

This action must be carried out during the tibial cut (Step 1 - Tibial preparation page 10).

Adjust the distal femoral cut on the basis of the difference between the shortest external condyle and the longest internal condyle:

- gap of 2 mm: perform a standard cut,
- gap of 4 to 6 mm: perform a cut of 2 mm,
- gap greater than 6 mm: perform a cut of 4 mm.

This adjustment is necessary to ensure the quality of the distal femoral cut and to allow a satisfactory average interline height to be kept with regards to the femoral-patellar joint.

Note

This action must be carried out during the distal femoral cut (Step 2 - Femoral preparation page 13).

■ CAPSULE AND LIGAMENTS RELEASE

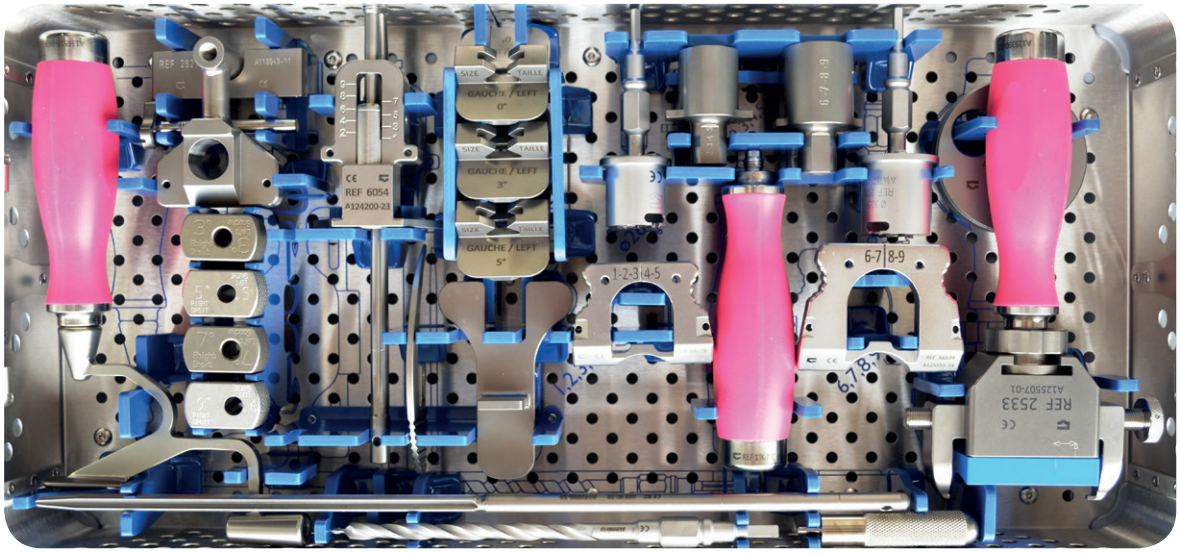
The release of these external structures is carried out in extension at the level of the tibial cut. Priority should be given to the following, in this order:

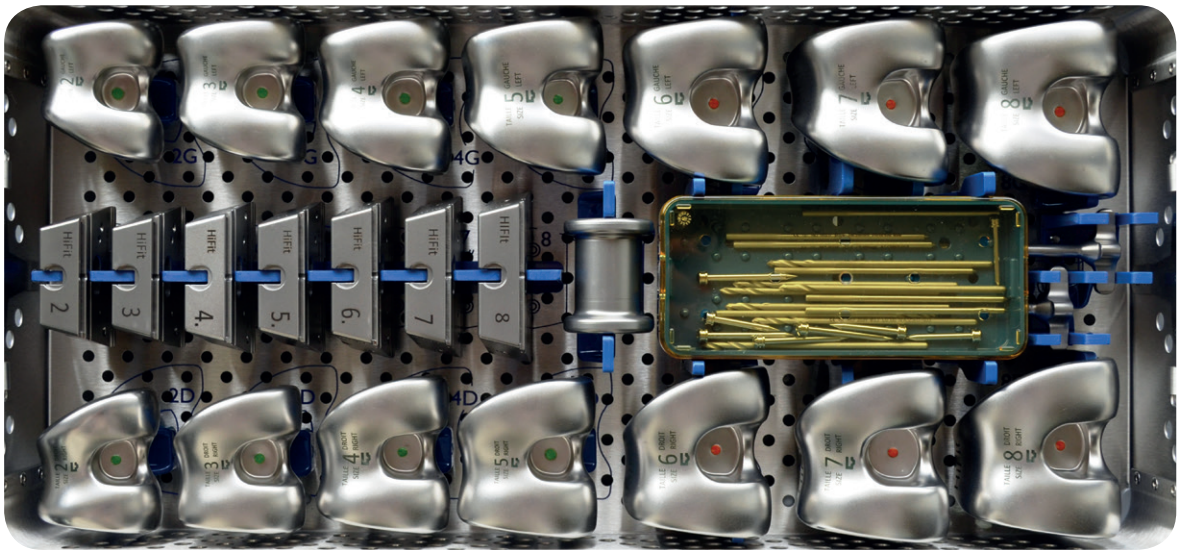
- the fascia lata (lateral structure),
- then the capsule by the posterolateral angle,
- and finally the extension of the posterior condylar casing. It is crucial to keep the popliteral tendon so as not to compromise the ligament balancing in flexion or cause excessive external rotation of the femoral implant.

Note

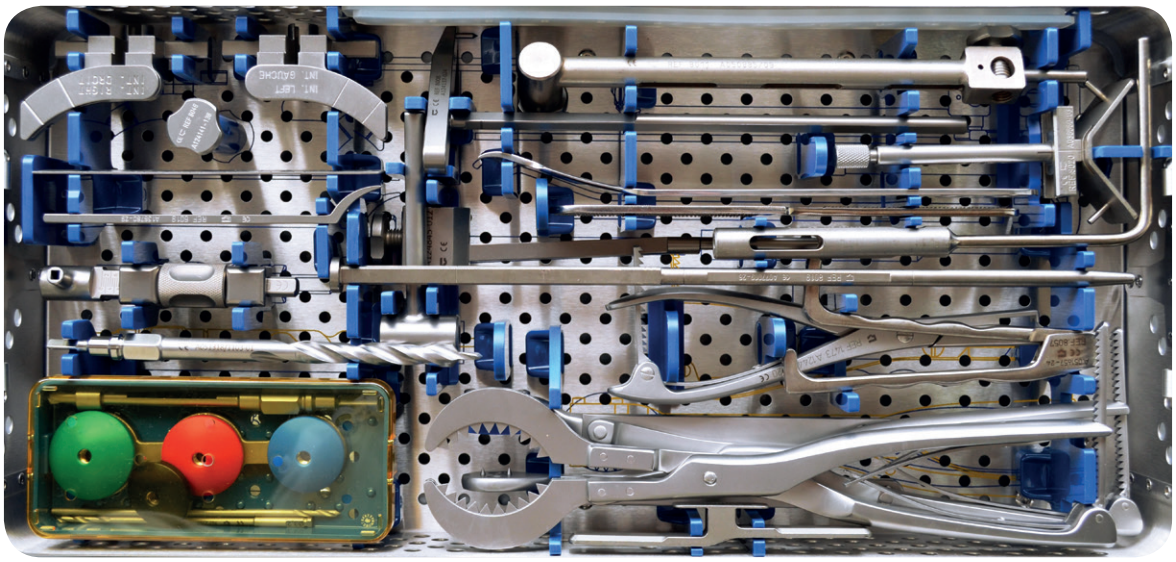
This action must be carried out when determining the femoral-tibial space in extension (Step 3 - Tibial preparation page 14).

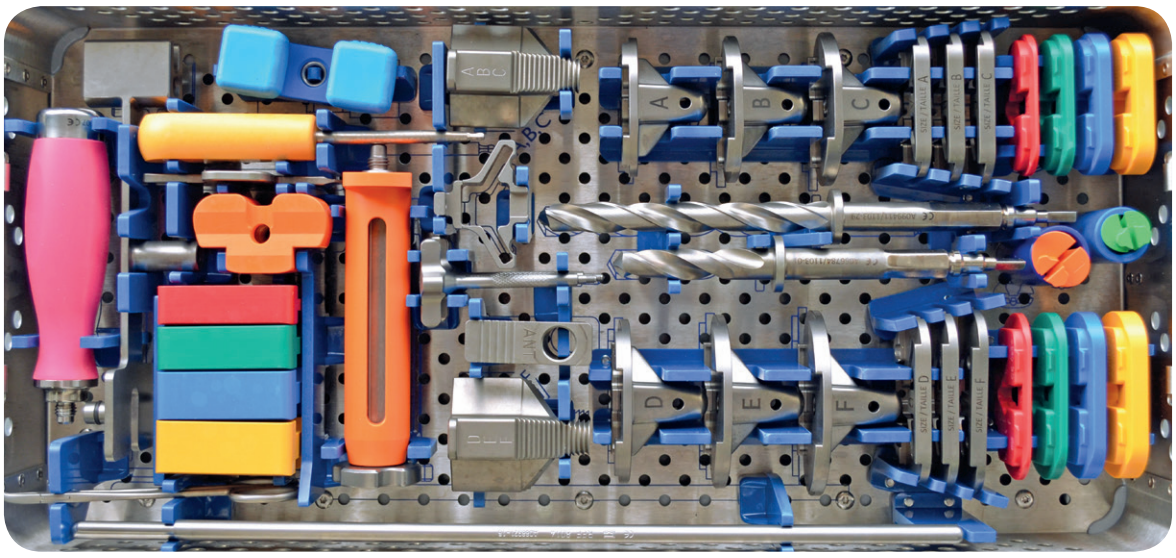
TRAYS 1 and 2: FEMUR





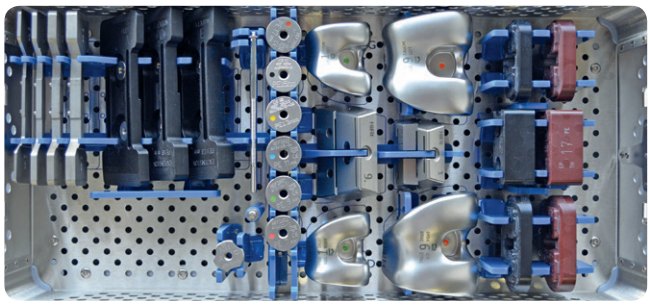
TRAYS 3 and 4: TIBIA AND PATELLA





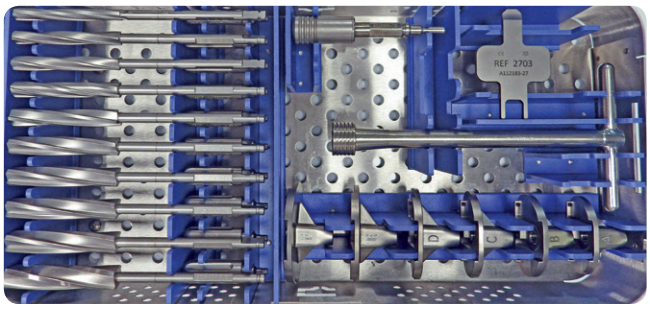
ADDITIONAL INSTRUMENTATIONS

REF. 16502: EXTREME SIZES AND LIGAMENT-BALANCING



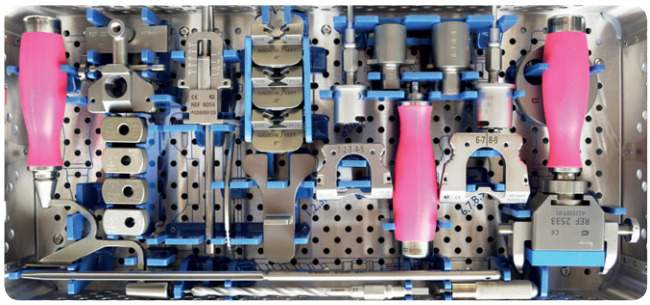
REF. 16518: ADDITIONAL INST. EXTENSION OPTION

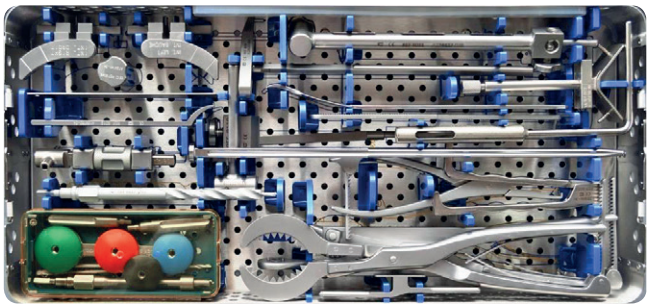
This instrumentation is additional to ref. 16501 and allows the placement of extensions of Ø 10 to 19 mm.

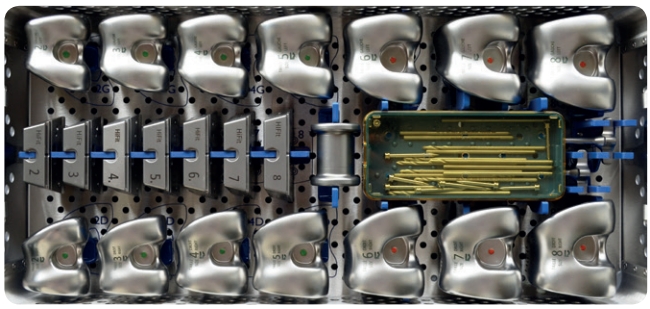


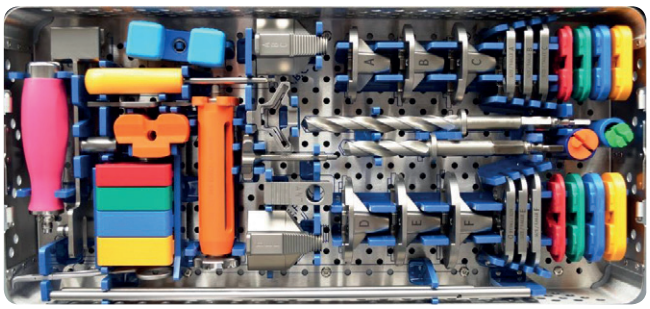
REF. 16521: STANDARD INSTRUMENTATION WITH EXTENSION OPTION

This instrumentation is identical to ref. 16501, supplemented by trial extensions of Ø 12 and 14 mm and the corresponding trial baseplates.









HIFIT

CEMENTED FEMORAL COMPONENT in cobalt-chrome alloy (ISO 5832-4)

Size		1*	2	3	4	5
Dimension	AP (mm)	51,5	55	57,5	60	62,5
	ML (mm)	60	65	65	70	70
Reference	Right	15601	15602	15603	15604	15605
	Left	15501	15502	15503	15504	15505

Size		6	7	8	9*
Dimension	AP (mm)	65	67,5	70	75
	ML (mm)	75	75	80	85
Reference	Right	15606	15607	15608	15609
	Left	15506	15507	15508	15509

* Parts available upon request

CEMENTED TIBIAL BASEPLATE in titanium alloy (ISO 5832-3)

Size		A	B	C	D	E	F
Dimension	AP (mm)	39	42	45	48	52	56
	ML (mm)	63	66,5	70	74	78,5	84
	Reference	15701	15703	15705	15707	15709	15711

TIBIAL INSERT in UHMWPE (ISO 5834-2)

Size / thickness		7	9	11	13	15*	17*
A	peg Ø 17	15907	15909	15911	15913	15915	15917
B	peg Ø 17	15927	15929	15931	15933	15935	15937
C	peg Ø 17	15947	15949	15951	15953	15955	15957
D	peg Ø 17	15987	15989	15991	15993	15995	15997
C	peg Ø 22	15967	15969	15971	15973	15975	15977
D	peg Ø 22	16007	16009	16011	16013	16015	16017
E	peg Ø 22	16027	16029	16031	16033	16035	16037
F	peg Ø 22	16047	16049	16051	16053	16055	16057

* Parts available upon request

CEMENTED PATELLAR COMPONENT in UHMWPE (ISO 5834-2)

Diameter	Ø 31	Ø 34	Ø 36	Ø 39
Thickness (mm)	8	9	10	11
Reference	5090	5091	5092	5093

TIBIAL EXTENSION ** Length 50 mm, in titanium alloy (ISO 5832-3)

Diameter	Ø 10	Ø 11	Ø 12	Ø 13	Ø 14	Ø 15	Ø 16	Ø 17	Ø 18	Ø 19
Reference	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089

** Screw for tibial extension reference 3051, made of titanium alloy (ISO 5832-3)

Document intended for the exclusive use of healthcare professionals. HIFIT PS® - total knee prosthesis - is a class III CE marked medical device made by CERAVER – LES LABORATOIRES OSTEAL MEDICAL Company and for which Conformity assessment was carried out by Notified Body G-MED N°0459. HIFIT PS prosthesis is intended to replace completely a knee joint that cannot be treated through other therapies. Before any surgical procedure, read carefully instructions for use and surgical technique. For proper use and installation of these devices, qualified professionals must use instruments of the associated kit.

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