

## Measured Resection Fixed Reference Surgical Technique

Featuring the mini-subvastus approach

*never stop moving™*



Contemporary total knee arthroplasty demands high performance instrumentation that provides enhanced efficiency, precision, and flexibility. Through a program of continuous development DePuy now offers a single system of Sigma® High Performance instruments that supports most approaches to knee replacement surgery.

This surgical technique provides instruction on the implantation of the Sigma® family of fixed bearing and rotating platform knees utilising the new Fixed Reference femoral preparation system.

The Sigma® High Performance instrumentation has been designed to be used with 1.19 mm thick saw blades for the best outcome.

There are several approach options available to the surgeon, the most common are; medial parapatellar, mini-midvastus and mini-subvastus. In this surgical technique we feature the mini-subvastus approach.

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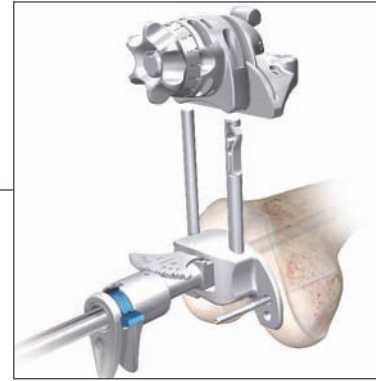
# Surgical Summary



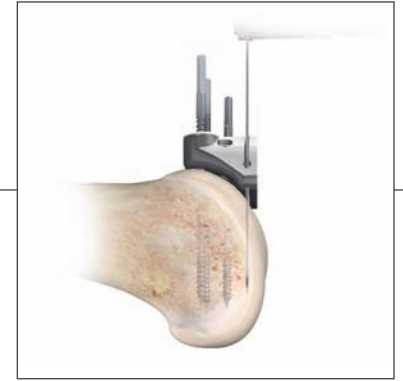
**Step 1:** Incision and exposure



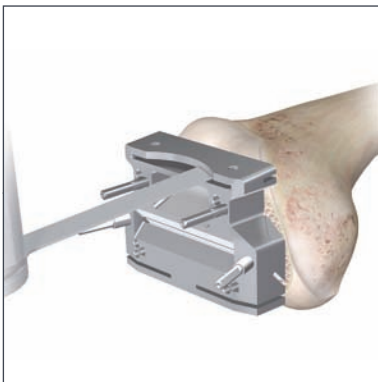
**Step 2:** Patella resection



**Step 3:** Femoral alignment



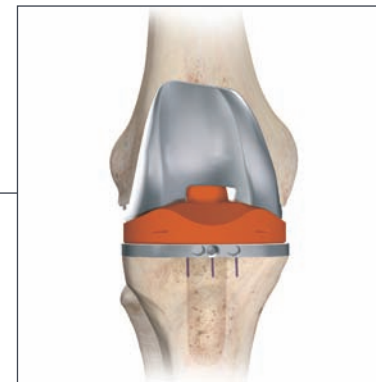
**Step 4:** Distal femoral resection



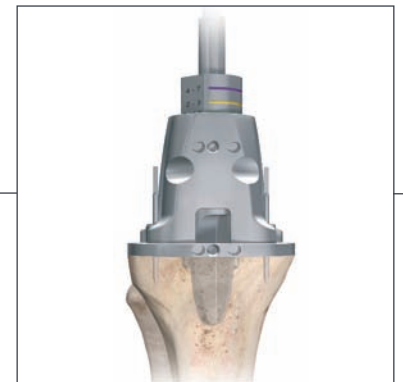
**Step 9:** Femoral preparation



**Step 10:** Femoral resection notch cuts



**Step 11:** Trial reduction



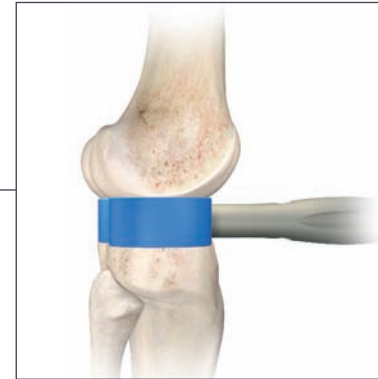
**Step 12:** Tibial preparation



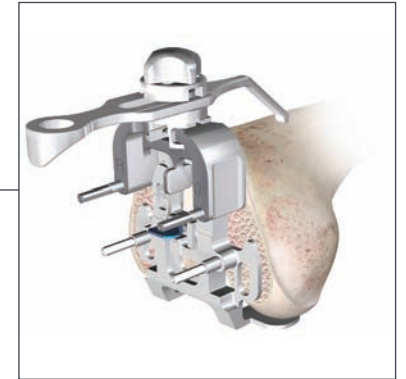
**Step 5:** Lower leg alignment



**Step 6:** Tibial resection



**Step 7:** Soft tissue balancing



**Step 8:** Femoral sizing and rotation



**Step 13:** Final patella preparation



**Step 14:** Final component implantation

# Incision and Exposure

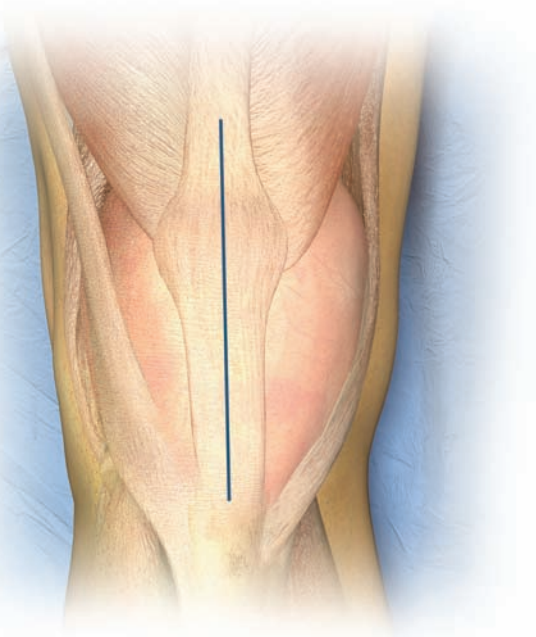


Figure 1

The Sigma® High Performance (HP) instrumentation has been designed for use with and without Ci™ computer assisted surgery, for both open and minimally invasive approaches to the knee.

Make a straight midline skin incision starting from 2 to 4 cm above the patella, passing over the patella, and ending at the tibial tubercle (Figure 1).

For surgeons choosing the medial parapatellar (Figure 2):  
With neutral alignment or with varus deformity, make a medial parapatellar incision through the retinaculum, the capsule and the synovium. The medial parapatellar incision starts proximal (4 cm) to the patella, incising the rectus femoris tendon longitudinally, and continues distally around the medial aspect of the

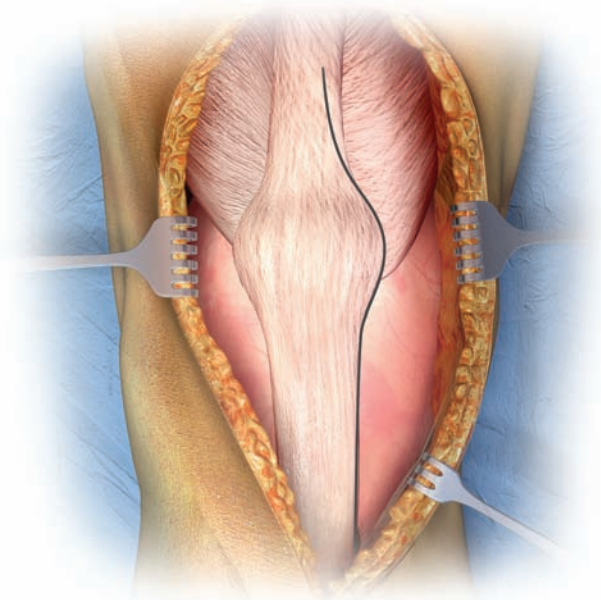


Figure 2

patella and ligamentum patella stopping just medial to the tibial tubercle (Figure 2). Following this incision, either evert or luxate the patella laterally to expose the entire tibio-femoral joint.

For surgeons choosing the mini mid-vastus option (Figure 3):  
The mid-vastus approach starts 3-4 cm in the middle of the vastus medialis obliquus

(VMO), running distal and lateral to the muscle fibres towards the rectus femoris, splitting the VMO.

Continue the incision distally around the medial aspect of the patella and ligamentum patella stopping just medial to the tibial tubercle (Figure 3). Following this incision, luxate the patella laterally to expose the entire tibio-femoral joint.



# Incision and Exposure

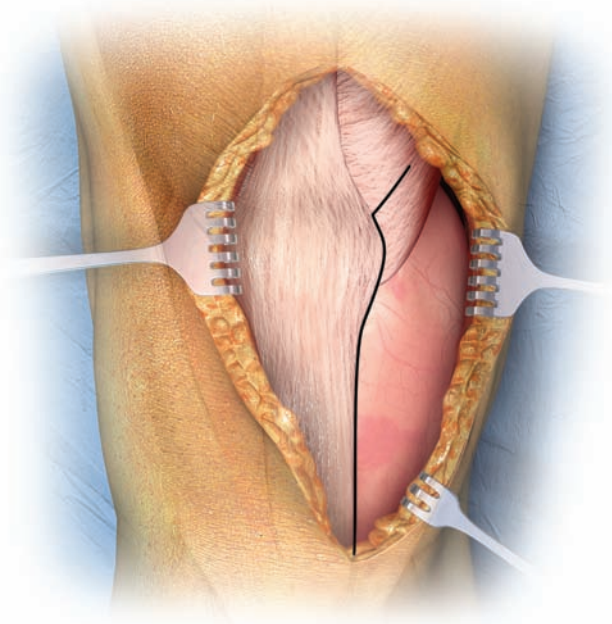


Figure 3

## Subvatus Tip:

For surgeons choosing the mini subvastus option (Figure 4):

The skin incision is made from the superior pole of the patella to the tibial tubercle. In most patients the skin incision measures 9 to 11.5 cm in full extension with longer incisions being used for patients who are taller, heavier, or more muscular.

Surgeons should start with a traditional 15 to 20 cm incision and then shorten the incision length over time.

The medial skin flap is elevated to clearly delineate the inferior border of the vastus medialis obliquus muscle. The fascia overlying the VMO is left intact as this helps maintain the integrity of the muscle belly itself throughout the case. The anatomy is very consistent. The inferior edge of the VMO is always found more inferior and more medial than most surgeons anticipate. The muscle fibres of the VMO are orientated at a 50 degree angle (or 130 degrees

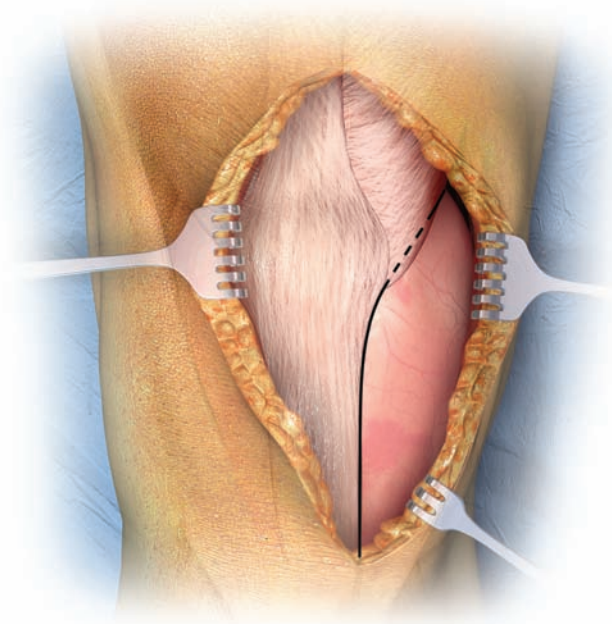


Figure 4

relative to the long axis of the limb) and the VMO tendon always attaches to the mid-pole of the patella. It is very important to save this edge of the tendon down to the mid-pole. That is where the retractor will rest so that the VMO muscle itself is protected throughout the case. The arthrotomy is made along the inferior edge of the VMO down to the mid-pole of the patella. At the mid-pole of the patella the arthrotomy is directed straight distally along the medial border

of the patellar tendon. A 90 degree bent-Hohmann retractor is placed in the lateral gutter and rests against the robust edge of VMO tendon that was preserved during the exposure. Surprisingly little force is needed to completely retract the patella into the lateral gutter. The knee is then flexed to 90 degrees providing good exposure of both distal femoral condyles.

# Incision and Exposure

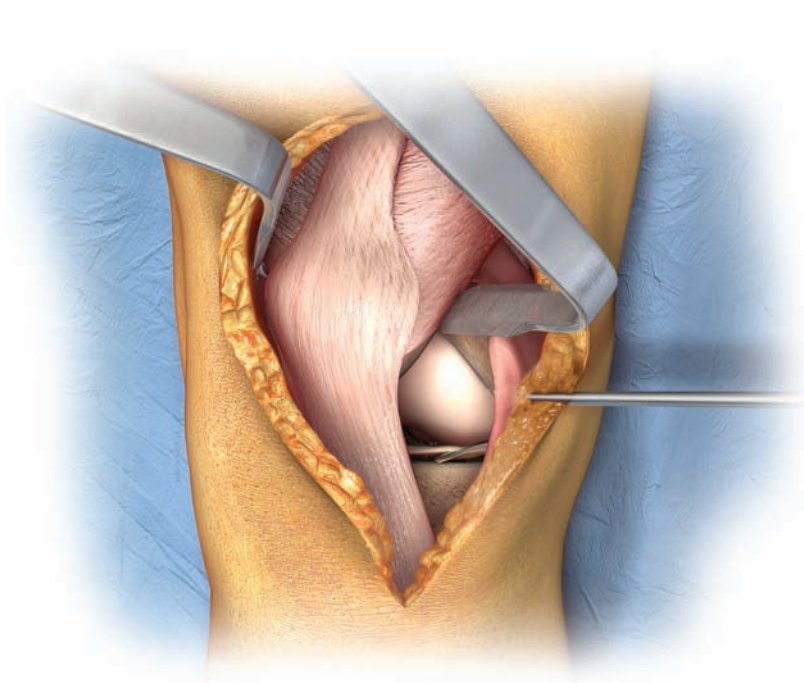


Figure 5

Two 90 degree bent-Hohmann retractors are very useful for this procedure and are highly recommended (Figure 5). The 90 degree angle is excellent in safely and efficiently retracting the quadriceps and patella laterally; the tapered tip slides effectively into place to protect the medial and lateral collateral ligaments during femoral and tibial preparation.

A large Kocher clamp is clipped in place along the medial soft-tissue sleeve just superior to the medial meniscus and is left in place for the entire procedure as a retractor to facilitate visualisation of the medial side. When having difficulties in correctly placing the instruments in any of these approaches, the incision should be further extended to avoid over-retraction of the soft tissues.

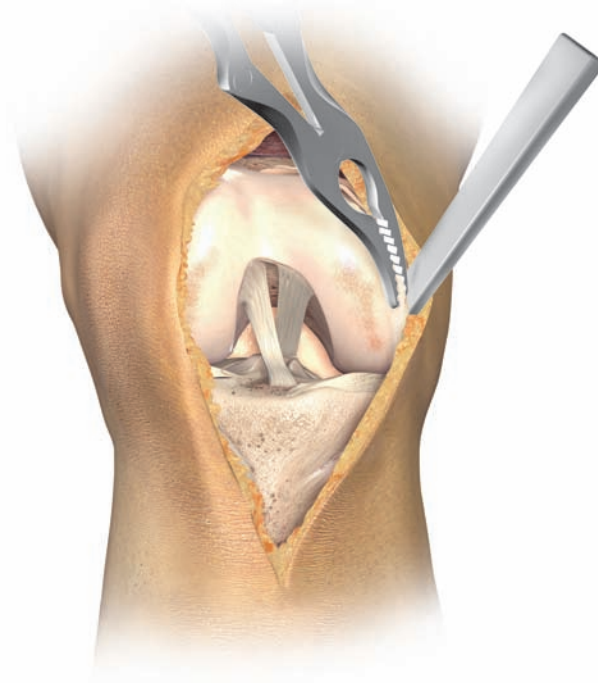


Figure 6

Excise hypertrophic synovium if present and a portion of the infrapatella fat pad to allow access to the medial, lateral and intercondylar spaces.

All osteophytes should be removed at this stage as they can affect soft tissue balancing (Figure 6).

*Particular attention should be given to posterior osteophytes as they may affect flexion contracture or femoral rotation.*

Evaluate the condition of the posterior cruciate ligament (PCL) to determine the appropriate Sigma® component to use. Resect the PCL if required.



# Patella Resection

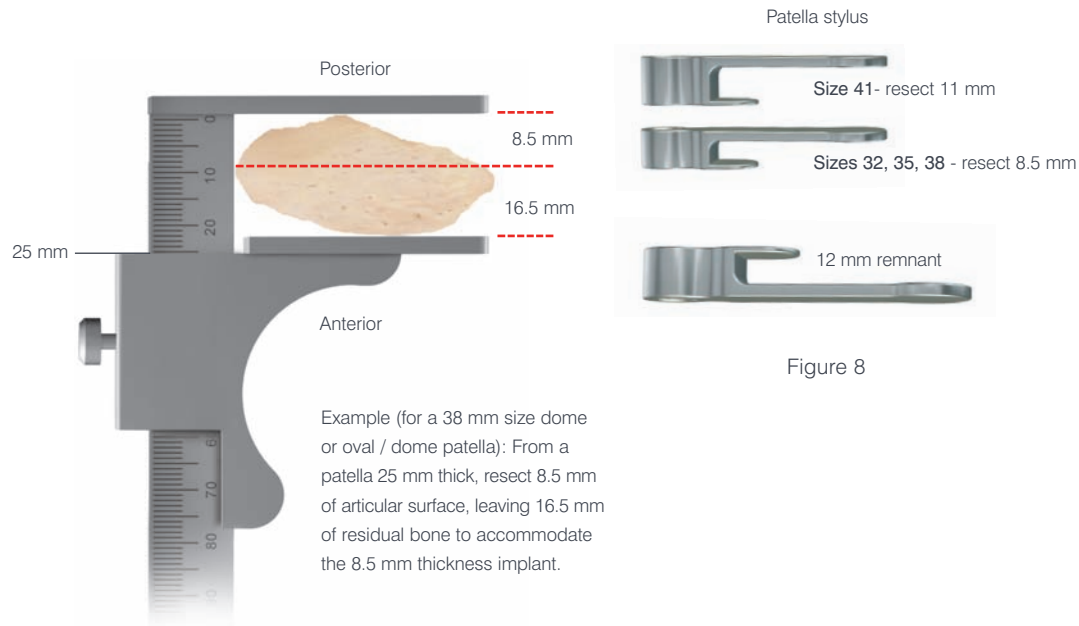


Figure 7

Resection and preparation of the patella can be performed sequentially or separately, as desired and can be performed at any time during surgery. Measure the thickness of the patella (Figure 7). The size of the resurfaced patella should be the same as the natural patella. There should be equal amounts of

bone remaining in the medial / lateral and superior / inferior portions of the patella. Select a patella stylus that matches the thickness of the implant to be used. Slide the appropriate size stylus into the saw capture of the resection guide (Figure 8). To reduce the risk of fracture a minimum of 12 mm should remain after resection.

Therefore for a size 41 mm implant the minimum natural patella thickness should be 23 mm. For all other sizes of patella the minimum should be 20.5 mm. In cases of a thin patella a 12 mm remnant stylus can be attached to the resection guide resting on the **anterior** surface of the patella, to avoid

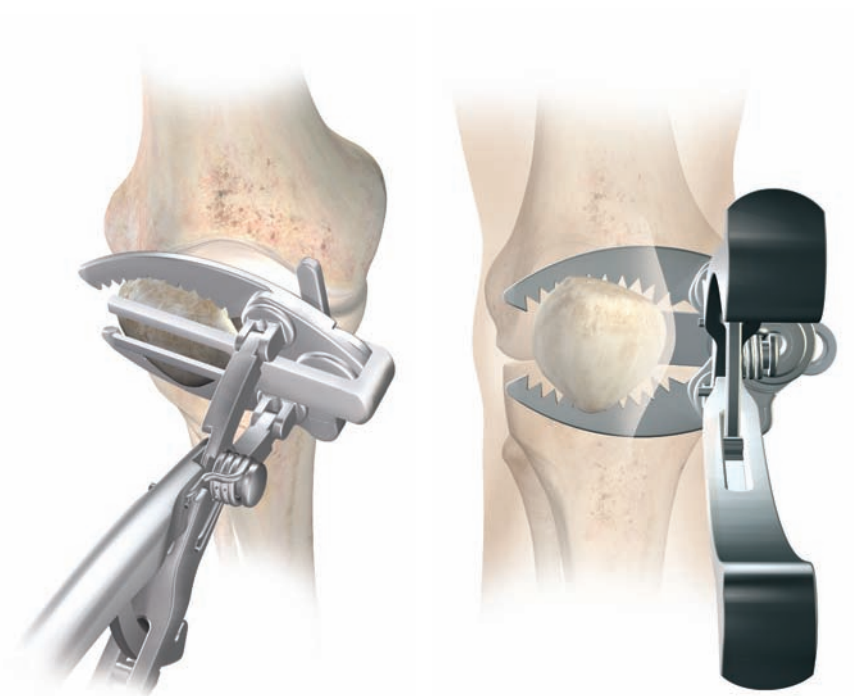


Figure 9

Figure 10

overresection (Figure 9). Place the leg in extension and position the patella resection guide with the sizing stylus against the **posterior** cortex of the patella with the serrated jaws at the superior and inferior margins of the articular surface. The jaws should be closed to firmly engage the patella (Figure 10).

# Patella Resection

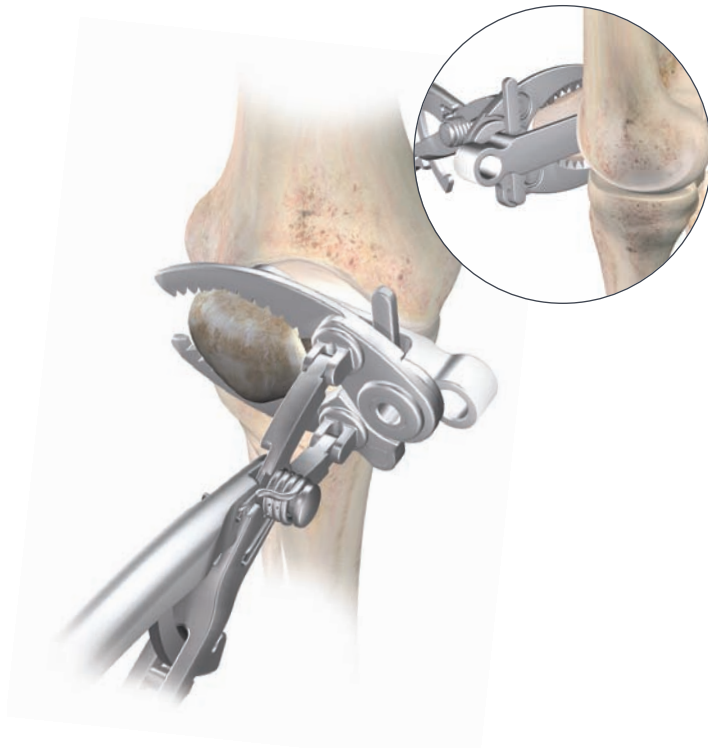


Figure 11

Tilt the patella laterally to an angle of 40 to 60 degrees (Figure 11).

Remove the stylus and perform the resection using an oscillating saw through the saw capture and flush with the cutting surface (Figure 12).

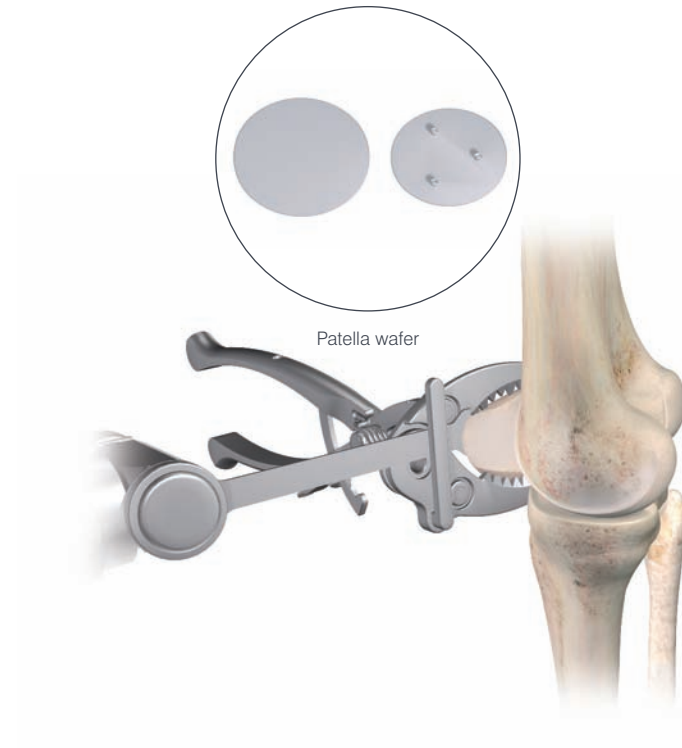


Figure 12

A patella wafer can be hand placed on the resected surface if required, to protect the patella bone bed.

# Femoral Alignment

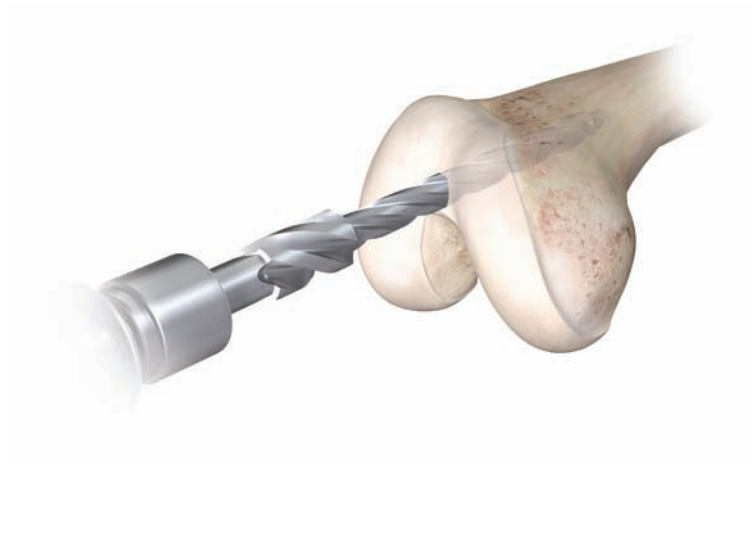


Figure 13

Subvastus tip: Medially and laterally, the 90 degree bent-Hohmann retractors are placed to protect the skin and the collateral ligaments. Bringing the knee up to 60 degrees of flexion better exposes the anterior portion of the distal femur. Care must be taken to protect the muscle and skin during guide placement and bone cutting.

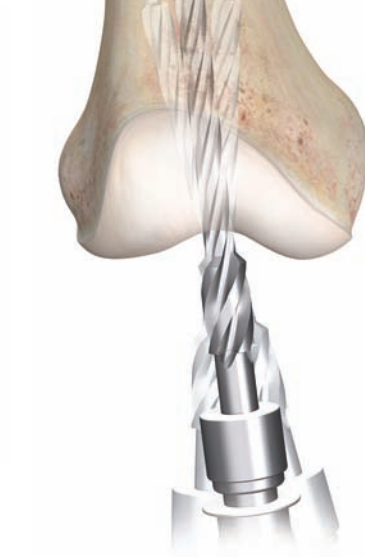


Figure 14

Bringing the knee into some extension eases the tension on the extensor mechanism and skin, and thus decreases the risk to those structures.



Figure 15

Enter the medullary canal at the midline of the trochlea, 7 mm to 10 mm anterior to the origin of the PCL (Figure 13). Use the step part of the drill to increase the diameter of the hole if required. The drill may be positioned anteromedially to allow unobstructed passage of the I.M. rod in the femoral canal (Figure 14).

Attach the T-handle to the I.M. rod and slowly introduce the rod into the medullary canal, to the level of the isthmus (Figure 15).



# Femoral Alignment



Figure 16

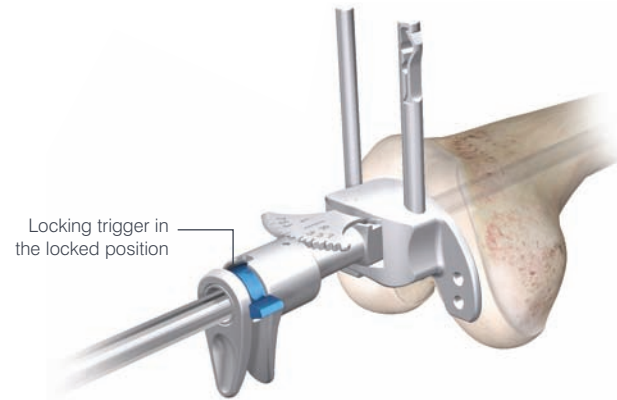


Figure 17

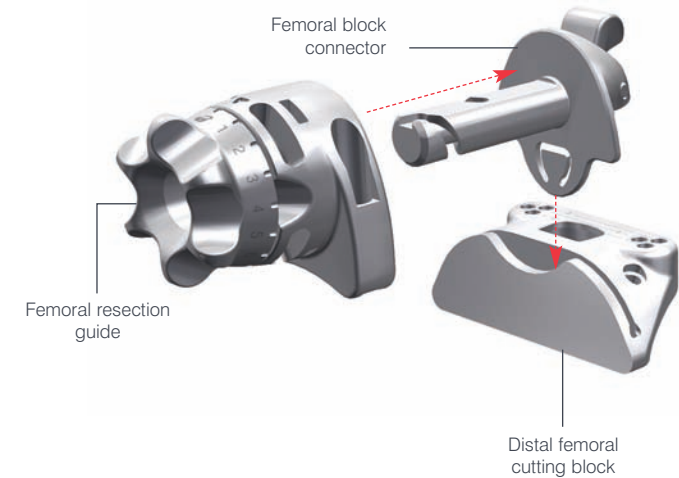


Figure 18

**Note:** Although this manual illustrates the *Femur First* technique, the Sigma® HP technique can also be performed using the *Tibia First* approach.

Preoperative radiographs are used to define the angle between the femoral, anatomical and mechanical axis.

The valgus angle (left or right - 0° to 9°) on the femoral alignment guide is set by compressing the two triggers and locked in place by rotating the blue locking lever clockwise (Figure 16 and 17).

The T-handle is removed and the femoral alignment guide is placed on the I.M. rod and seated against the distal femur (Figure 17).

Rotate the knob on the resection guide until the arrow is pointing to the padlock symbol. Insert the femoral block connector into the resection guide. Turn it clockwise to engage. The scale on the dial corresponds to a slotted resection. Place the cutting block in the femoral block connector so that the tang on the connector slides into the cutting slot on the cutting block.

The trigger should engage in the hole behind the slot (Figure 18).

# Femoral Alignment

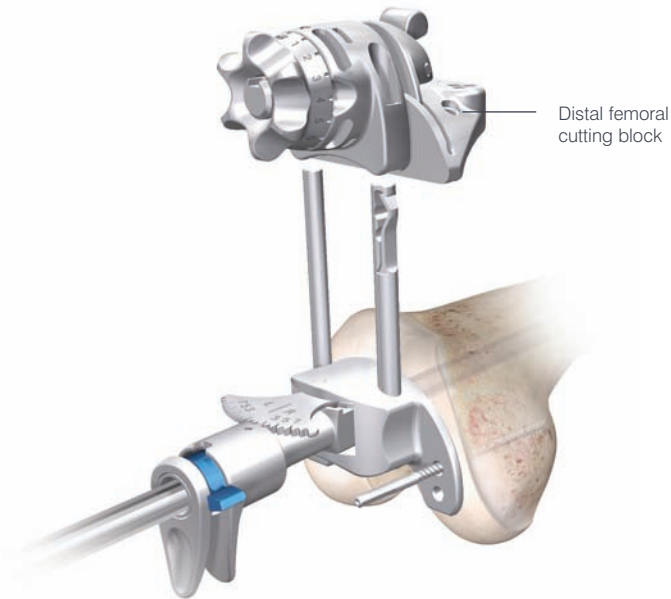


Figure 19

Position the resection guide over the two legs of the distal femoral alignment guide until the distal cutting block touches the anterior femur (Figure 19).

## Optional

Adjust the internal / external rotation of the alignment guide with reference to the trochlear groove. When rotation is correct, secure the alignment guide by inserting one threaded pin through the medial hole.



Figure 20

Adjust the medial-lateral placement of the resection block as desired and rotate until firmly seated on the anterior condyles.

Secure the cutting block to the femur with two threaded pins through the holes marked with a square. Make sure the pins are engaging the posterior condyles.

This will allow a +2 or -2 mm adjustment to be made.

Set the guide to resect at least 9 mm of distal femoral bone from the most prominent condyle (Figure 20).



# Distal Femoral Resection

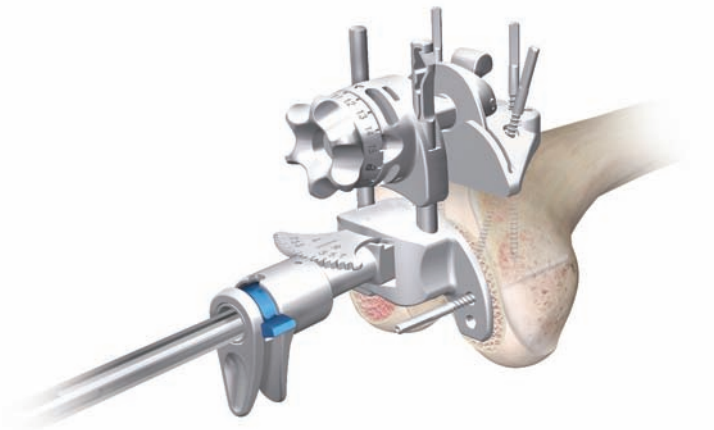


Figure 21

After the correct amount of resection is set, add a convergent pin through the medial hole in the block to aid stability (Figure 21).

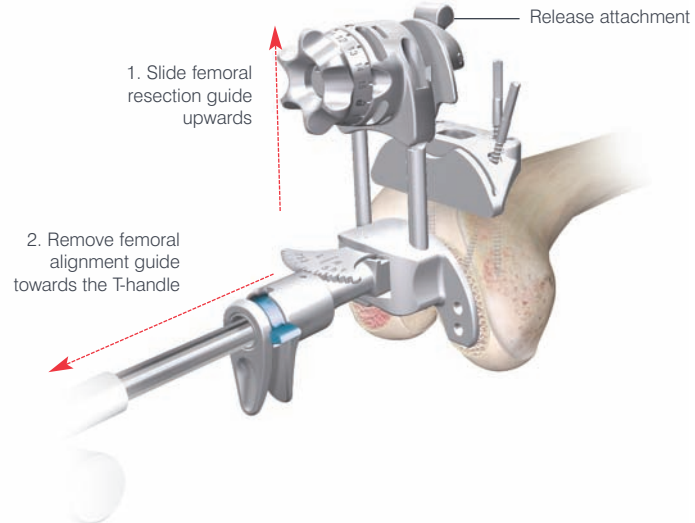


Figure 22

## Removal of the Femoral Alignment Guide

First attach the T-handle to the I.M. guide. Then unlock the cutting block from the block connector, using your thumb and index finger to release the attachment. Slide the femoral resection guide upwards over the legs until the block connector

disengages the cutting block and in one motion remove the femoral alignment guide by pulling the instruments distally in the direction of the T-handle (Figure 22).



Figure 23

Perform the distal femoral resection (Figure 23).

# Tibial Jig Assembly

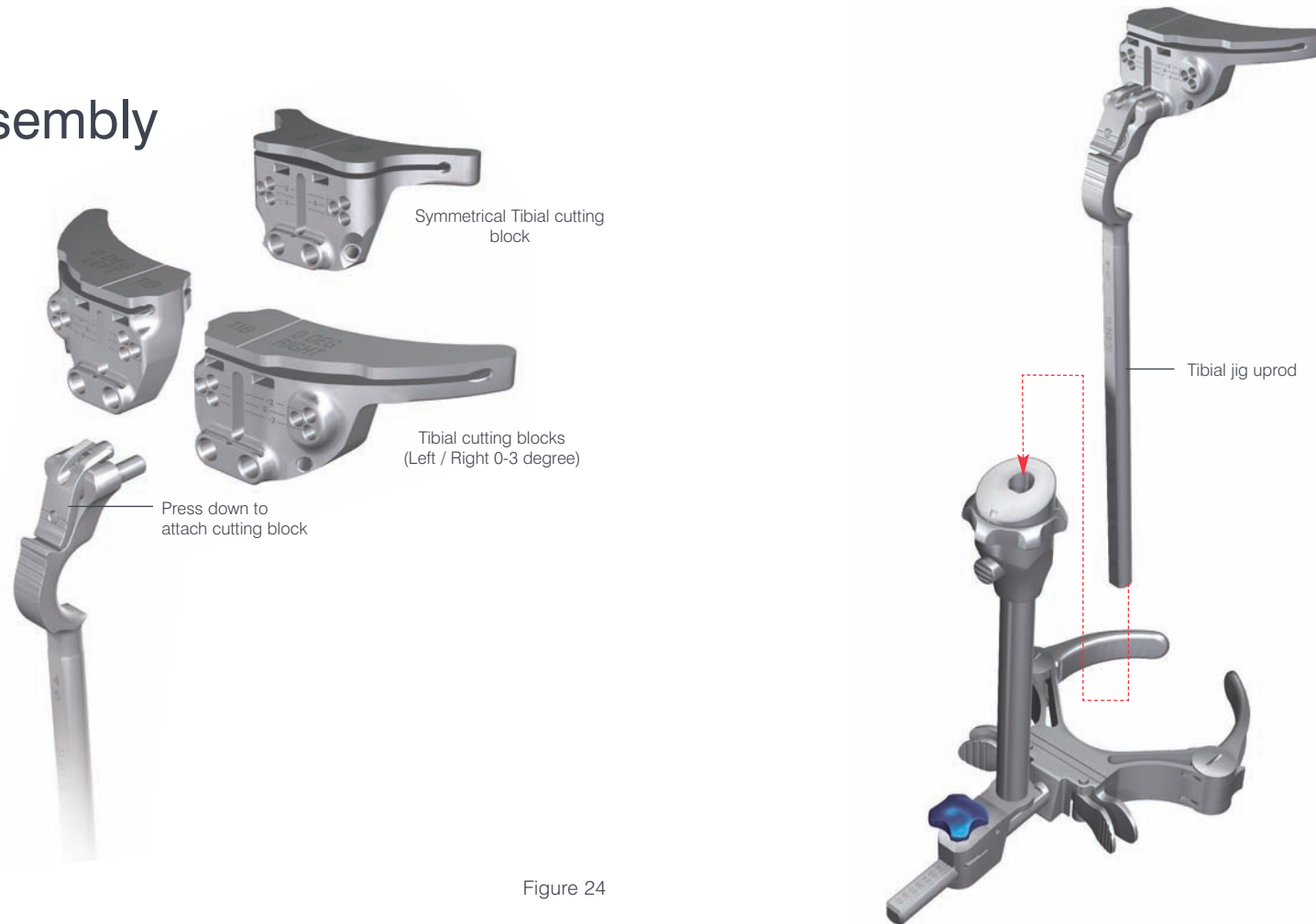


Figure 24

The tibia can now be resected to create more room in the joint space.

Assemble the appropriate 0-3 degree, left / right or symmetrical cutting block to the tibial jig uprod. Slide the tibial jig uprod into the ankle clamp assembly (Figure 24).

**Subvastus tip:** Three retractors are placed precisely to get good exposure of the entire surface of the tibia: a pickle-fork retractor posteriorly provides an anterior drawer and protects the neurovascular structures; and bent-Hohmann retractors medially and

laterally protect the collateral ligaments and define the perimeter of the tibial bone. The tibia is cut in one piece using a saw blade that fits the captured guide.

# Lower Leg Alignment



Figure 25

Place the knee in 90 degrees of flexion with the tibia translated anteriorly and stabilised. Place the ankle clamp proximal to the malleoli (Figure 25). Align the proximal central marking on the tibia cutting block with the medial one third of the tibial tubercle to set rotation.

To provide stability, insert a central pin through the vertical slot in the cutting block (Figure 25). Push the quick release button to set the approximate resection level.

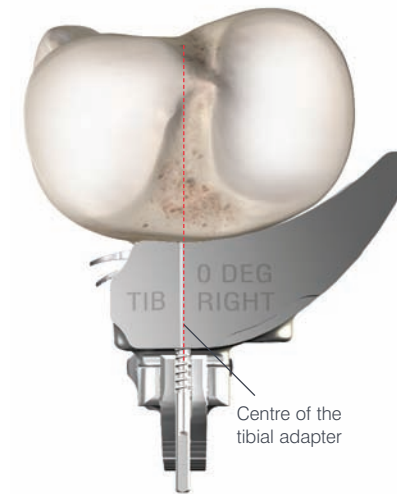


Figure 26

**Subvastus tip:** Through a small incision there is a tendency to place the tibial cutting guide in varus and internal rotation. Extra attention should be paid to the position of the tibial tubercle and the long axis of the tibial shaft during guide positioning to ensure correct varus / valgus alignment.

Establish rotational alignment by aligning the tibial jig ankle clamp parallel to the transmalleolar axis. The midline of the tibia is approximately 3 mm medial to the transaxial midline (Figure 26). The lower assembly is translated medially (usually to the second vertical mark), by pushing the varus / valgus adjustment wings. There are vertical scribe marks for reference aligning to the middle of the talus (Figure 27).

# Lower Leg Alignment



Figure 27

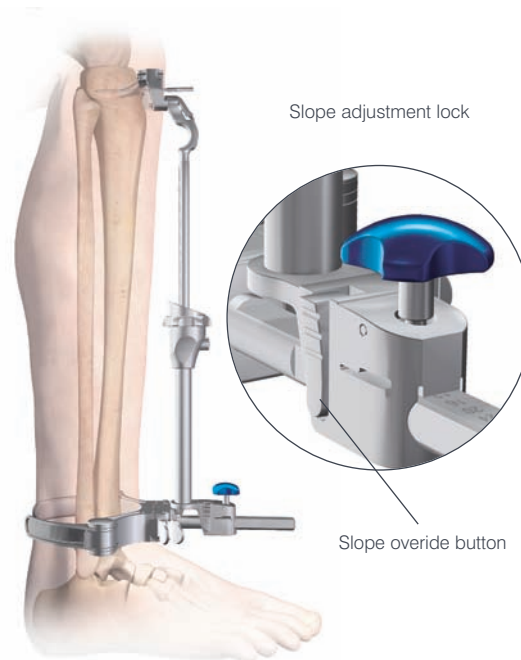


Figure 28



Figure 29

## Slope

The tibial jig uprod and ankle clamp are designed to prevent an adverse anterior slope. On an average size tibia this guide will give approximately a 0 degree tibial slope when the slope adjustment is translated anteriorly until it hits the stop. In some cases a slight amount of slope will remain (1-2 degrees) (Figure 27).

The angle of the tibial slope can be increased to greater than 0 degrees should the patient have a greater natural slope (Figure 28). First unlock the slide locking position and then translate the tibial slope adjuster anteriorly until the desired angle is reached. For a cruciate substituting (CS) design, a 0 degree posterior slope is recommended.

As each patient's anatomy varies, the tibial jig uprod can be used for both smaller and larger patients. The length of the tibia influences the amount of slope when translating the adapter anteriorly. The 0 degree default position can be overridden by pressing the slope override button and moving the slope adjustment closer to the ankle (Figure 28).

On the uprod 5, 6 and 7 zones are present, which correspond to the length of the tibia. These markings can be used to fine tune the amount of slope. When the uprod shows a mark 7 zone, this indicates that when the lower assembly is translated 7 mm anterior, it will give an additional 1 degree of posterior slope. For example, when the uprod shows a mark 5 zone, 5 mm translation is needed for an additional 1 degree (Figure 29).

# Lower Leg Alignment

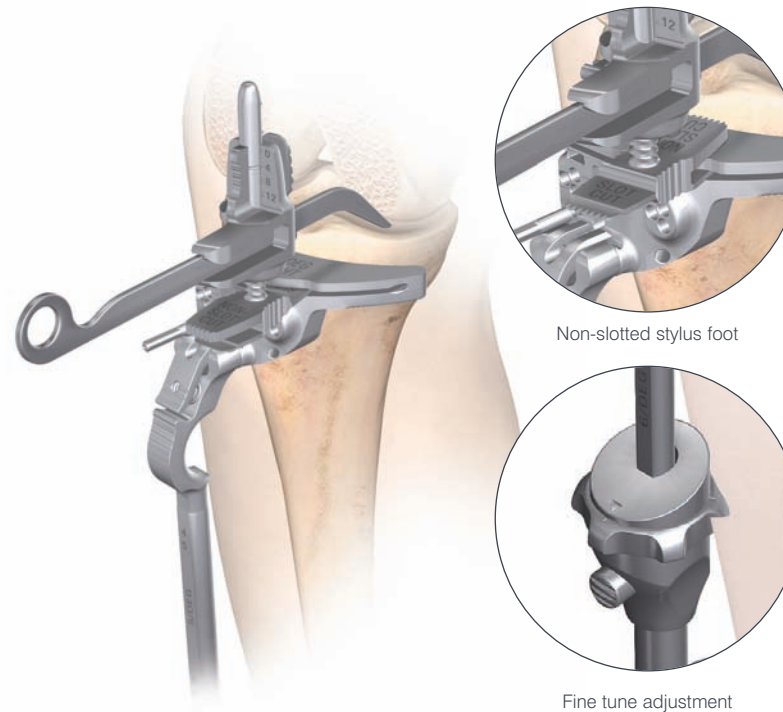


Figure 30

## Height

When measuring from the less damaged side of the tibial plateau set the stylus to 8 mm or 10 mm. If the stylus is placed on the more damaged side of the tibial plateau, set the stylus to 0 mm or 2 mm.

Adjustment of resection height on the stylus should be done outside the joint space before locating the stylus in the cutting block.

If planning to resect through the slot, position the foot of the tibial stylus marked "slotted" into the slot of the tibial cutting block (Figure 30). If planning to resect on top of the cutting block, place the foot marked "non-slotted" into the cutting slot.

The final resection level can be dialled in by rotating the fine-tune mechanism clockwise (upward adjustment) or counterclockwise (downward adjustment). Care should be taken with severe valgus deformity, not to over-resect the tibia.



# Tibial Resection

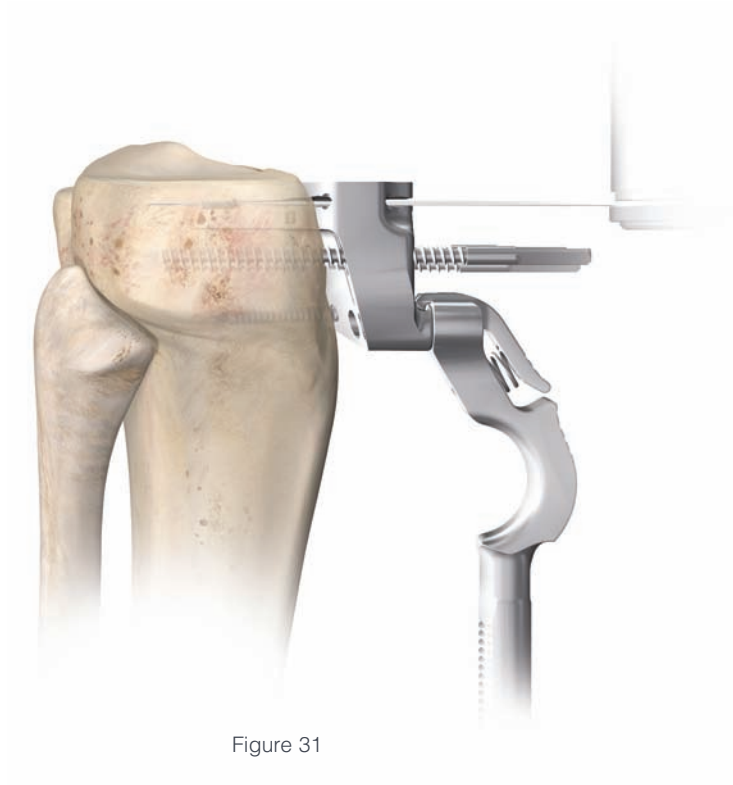


Figure 31

After the height has been set, pin the block through the 0 mm set of holes (the stylus may need to be removed for access). +2 and -2 mm pinholes are available on the resection blocks to further adjust the resection level where needed.

The block can be securely fixed with a convergent pin (Figure 31).

**Subvastus tip:** because the patella has not been everted the patellar tendon is often more prominent anteriorly than with a standard arthrotomy and thus at risk for iatrogenic damage with the saw blade during tibial preparation.

# Extension Gap Assessment and Balancing

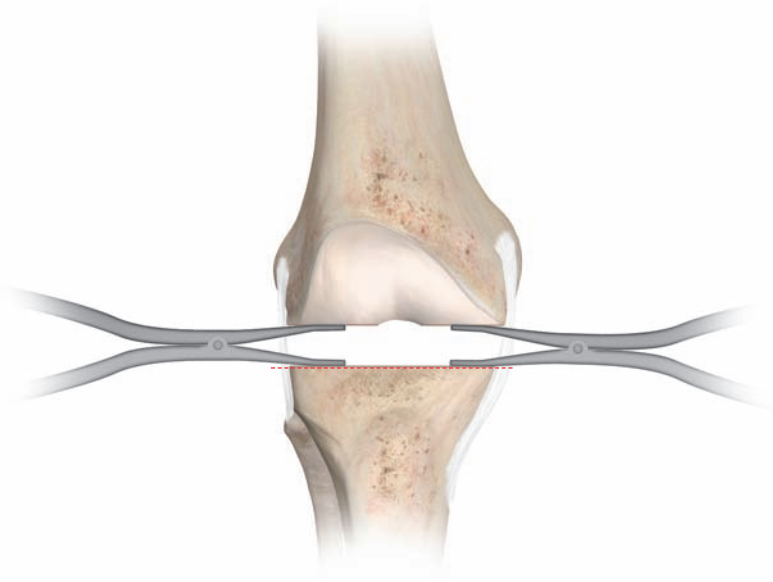


Figure 32

Place the knee in full extension and apply lamina spreaders medially and laterally. The extension gap must be rectangular in configuration with the leg in full extension. If the gap is not rectangular the extension gap is not balanced and appropriate soft tissue balancing must be performed (Figure 32).

A set of specific fixed bearing and mobile bearing spacer blocks are available. Every spacer block has two ends, one for measuring the extension gap and one for the flexion gap.

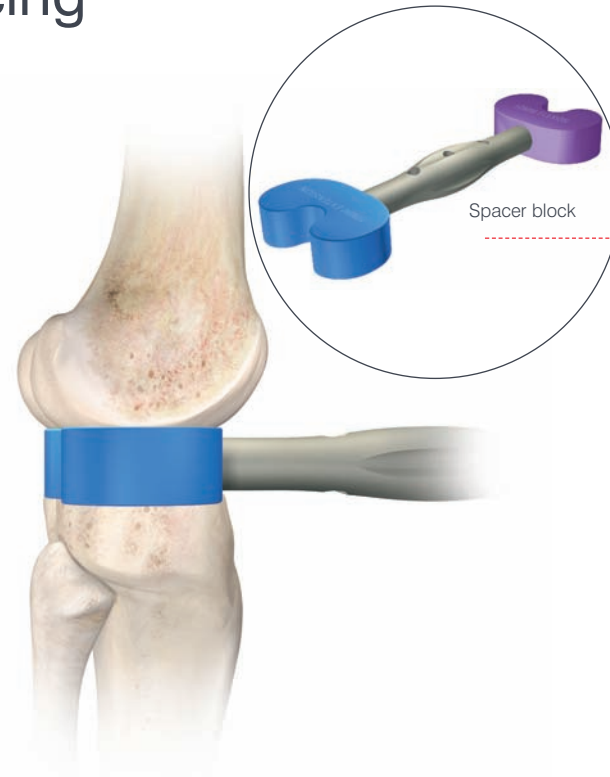


Figure 33

The extension gap side of the spacer block can be used to determine the appropriate thickness of the tibial insert and to validate the soft tissue balance (Figure 33).



Figure 34

Introduce the alignment rod through the spacer block. This may be helpful in assessing alignment (Figure 34).

# Femoral Sizing



Figure 35

Place the Fixed Reference sizing guide against the resected distal surface of the femur, with the posterior condyles resting on the posterior feet of the guide. Secure with pins (optional threaded headed pins) (Figure 35).

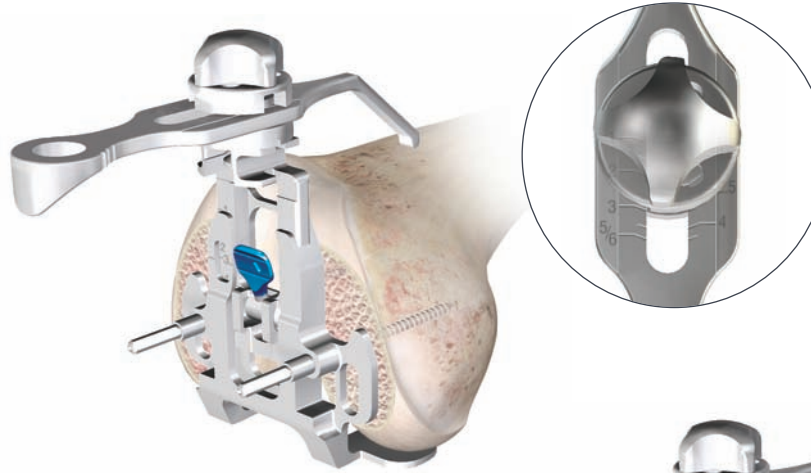


Figure 36

Place the sizing guide stylus on the anterior femur with the tip positioned at the intended exit point on the anterior cortex to avoid any potential notching of the femur.

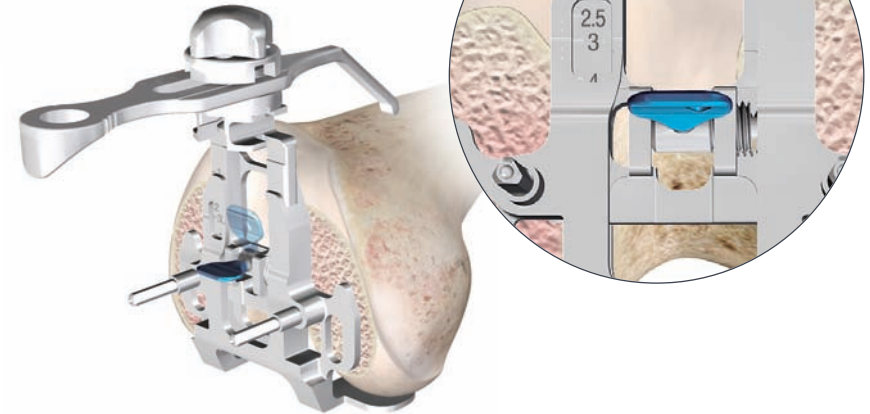


Figure 37

A scale on the surface of the stylus indicates the exit point on the anterior cortex for each size of femur. The scale is read from the distal side of the lock knob (Figure 36).

Tighten the locking lever downwards and read the size from the sizing window (Figure 37).

# Femoral Rotation

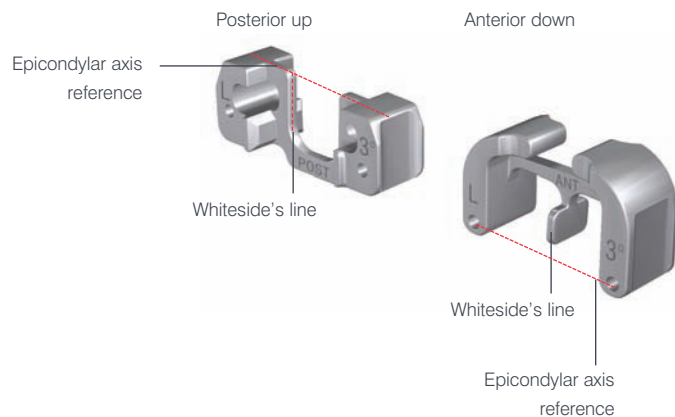


Figure 38

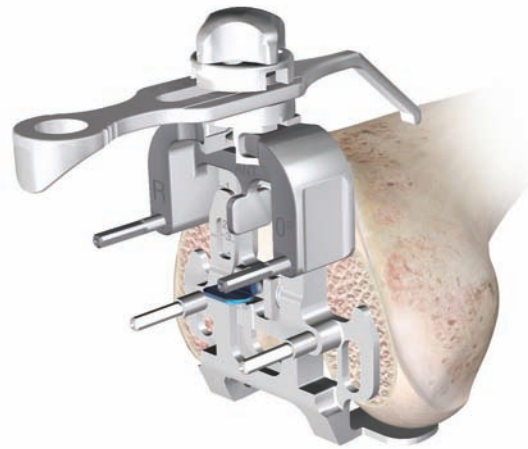


Figure 39

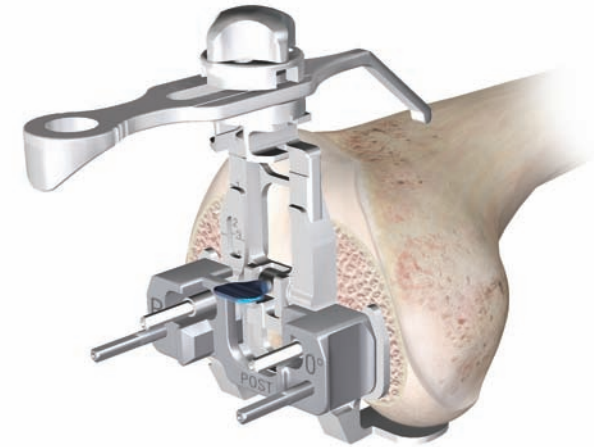


Figure 40

Select the anterior or posterior rotation guide that provides 0, 3, 5 or 7 degrees of femoral rotation. Flip the guide to LEFT or RIGHT (Figure 38) and attach to the sizer. Choose the degree of external rotation setting that is parallel to the epicondylar axis and perpendicular to Whiteside's line.

Both the anterior down and posterior up rotation guides have visual cues that can help with alignment to these axes.

Insert threaded (non-headed) pins through the holes (Figures 39 and 40) and remove the sizer / rotation guide assembly, leaving the pins in the distal femur.

*Note: Choosing the anterior rotation guide will provide a fixed anterior reference, or constant anterior cut, regardless of A/P Chamfer Block size. All variability in bone cuts from size to size will occur on the posterior cut.*

*Conversely, choosing the posterior rotation guide will provide a fixed posterior reference, or fixed posterior cut. All variability in bone cuts from size to size will occur on the anterior cut.*

# Femoral Preparation - A/P and Chamfer Cuts

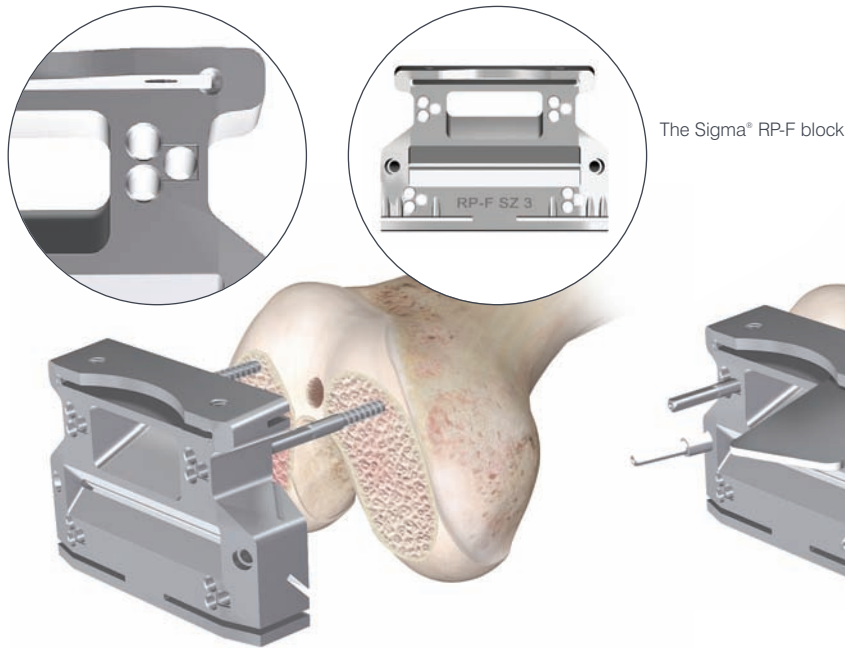


Figure 41

Select the Sigma® or Sigma® RP-F Fixed Reference A/P chamfer block that matches the femur size. The Sigma® RP-F and standard Sigma® A/P and chamfer cutting blocks look very similar. Care should be taken not to confuse the blocks as this will result in under or over resection of the posterior condyles (Figure 41).

The Sigma® RP-F block can be identified through the letters "RP-F" on the distal face, and a series of grooves along the posterior cut slot. Place the block over the 2 threaded pins through the 0 mm pinholes.



Figure 42

**Note:** The block may be shifted 2 mm anteriorly or posteriorly by selecting one of the offset holes around the "0" hole. When downsizing, selecting the smaller A/P chamfer block and the most anterior pin holes will take 2 mm more bone anteriorly and approximately 2 mm more bone posteriorly.

After confirming cut placement with the reference guide, or angel-wing, insert threaded headed pins into the convergent pin holes on the medial and lateral aspects of the A/P chamfer block (Figure 42). Resect the anterior and posterior femur (Figures 43 and 44).



# Femoral Preparation - A/P and Chamfer Cuts

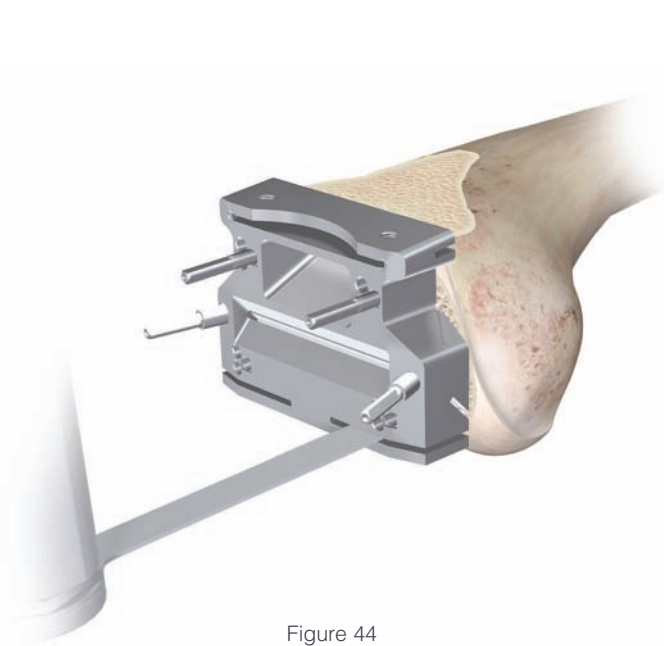


Figure 44

Place retractors to protect the medial cruciate ligament medially and the popliteal tendon laterally.

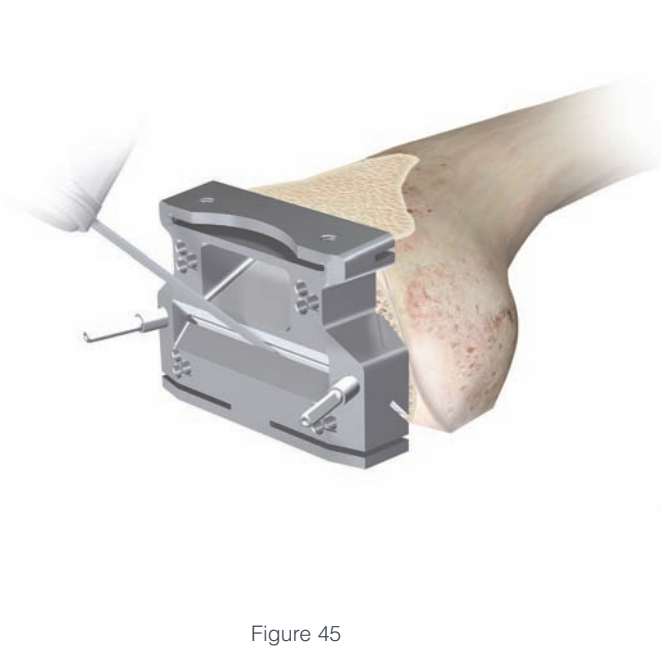


Figure 45

Remove the initial locating pins and proceed with chamfer cuts (Figures 45 and 46).

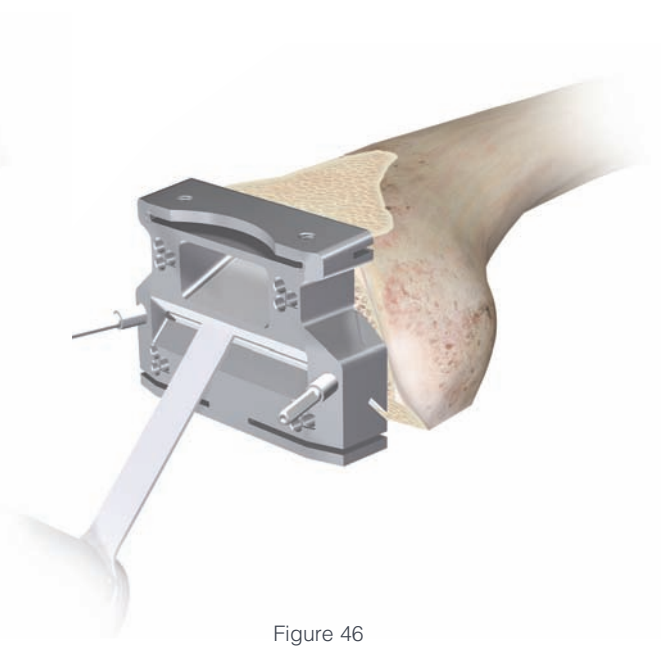


Figure 46

*Note: The posterior saw captures are open medially and laterally to ensure completed saw cuts over a wide range of femoral widths. To reduce the risk of inadvertent sawblade kickout when making posterior resections, insert the sawblade with a slight medial angle prior to starting the saw.*

# Femoral Resection - Notch Cuts



Figure 47

When using a stabilised Sigma® or Sigma® RP-F component, select and attach the appropriate femoral notch guide.

*Note: The Sigma® RP-F and standard Sigma® notch guides look very similar. Care should be taken not to confuse the blocks as this will result in under or over resection of the box.*

The Sigma® RP-F guide can be identified through the letters “RP-F” on the anterior face, and a series of grooves along the notch distal, anterior corner.



Figure 48

Position the notch guide on the resected anterior and distal surfaces of the femur. Pin the block in place through the fixation pin holes with at least three pins before any bone cuts are made (Figures 47 and 48).

# Trial Components (For Fixed Bearing, see Appendix A)



Figure 49

**Note:** *Either M.B.T. or Fixed Bearing tibial components can be trialled prior to performing the tibial preparation step.*

## Femoral Trial

Attach the slaphammer or universal handle to the femoral inserter / extractor. Position the appropriately sized femoral trial on the inserter by depressing the two triggers to separate the arms and push the trial against the conforming poly surface.

Release the triggers so that the arms engage in the slots on the femur, and rotate the handle clockwise to lock. Position the trial onto the femur, impacting as necessary. To detach the inserter from the femur rotate the handle counterclockwise and push the two triggers with thumb and index finger. Position the femoral trial onto the femur (Figure 49).



Figure 50

## Tibial Trial

Place the appropriate sized M.B.T. tray trial onto the resected tibial surface. Position the evaluation bullet into the cut-out of the M.B.T. tray trial (Figure 50). There are two options available to assess the knee during trial reduction. One or both may be used.

### 1) Trial reduction with trial bearing in non-rotation mode

This option is useful when the tibial tray component size is smaller than the femoral size.

**Note:** *Mobile bearing tibial insert size MUST match femoral component size.*

## Trial Components (For Fixed Bearing, see Appendix A)

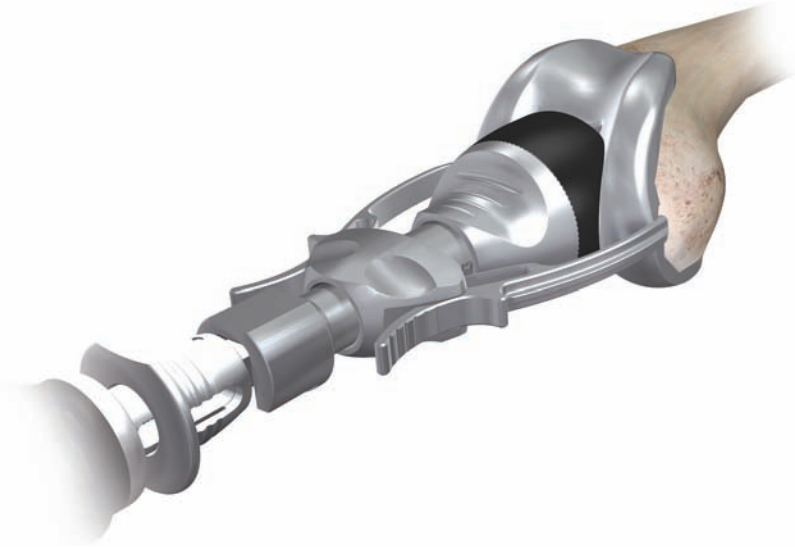


Figure 51

With equivalent sizes the bearing rotation allowance is 8 degrees for standard Sigma® and 20 degrees for Sigma® RP-F components. For a tibial tray one size smaller than the femoral component, this bearing rotation allowance reduces to 5 degrees. In this situation, finding the neutral position with respect to the femur is therefore more important in order to prevent bearing overhang and soft tissue impingement.

Position the evaluation bullet into the cut-out of the M.B.T. tray trial.

### **2) Trial reduction with trial bearing free to rotate**

This trial reduction can be done instead or in addition to the one described before. Place the appropriately sized M.B.T. trial tray onto the resected tibial surface (Figure 51).



Figure 52

Assess the position of the tray to achieve maximal tibial coverage. The rotation of the M.B.T. tray trial is usually centred on the junction between the medial and central one-third of the tibial tubercle. Secure the keel punch impactor to the spiked evaluation bullet and position into the cut-out of the M.B.T. tray trial.

Tap down lightly to secure the tray to the proximal tibia (Figure 52).

## Trial Components (For Fixed Bearing, see Appendix A)

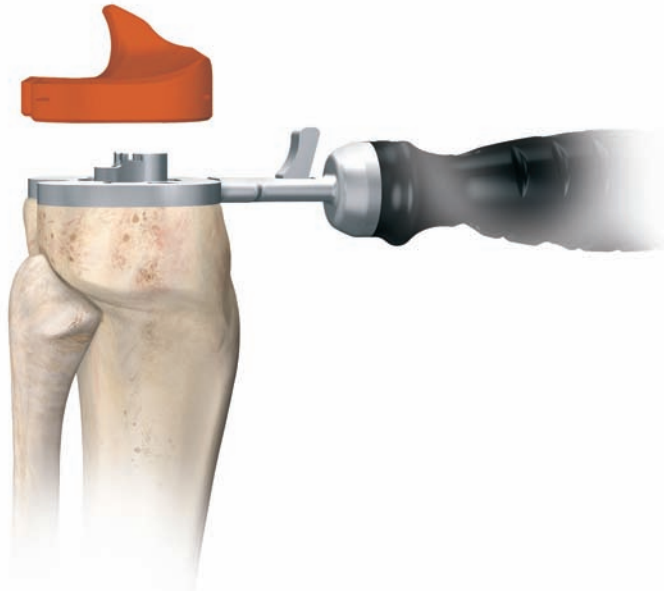


Figure 53

Select the tibial insert trial that matches the chosen femoral size and style, curved or stabilised, and insert it onto the M.B.T. tray trial (Figure 53). Carefully remove the tibial tray handle and, with the trial prosthesis in place, extend the knee carefully, noting the anterior / posterior stability, medial / lateral stability and overall alignment in the A/P and M/L plane.

If there is any indication of instability, substitute a tibial insert trial with the next greater thickness and repeat the reduction.

Select the tibial insert trial that gives the greatest stability in flexion and extension while still allowing full extension (Figure 54).

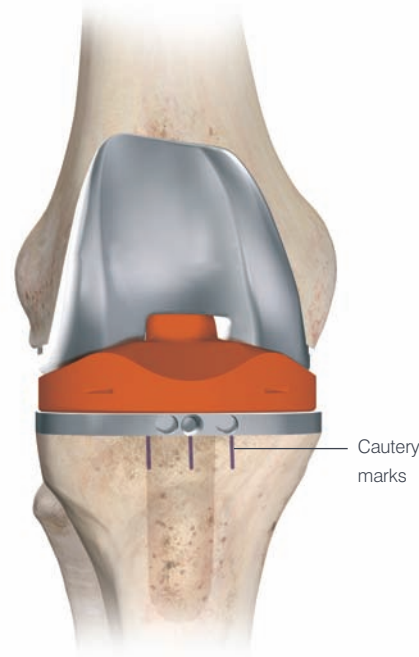


Figure 54

Rotational alignment of the M.B.T. tray trial is adjusted with the knee in full extension, using the tibial tray handle to rotate the tray and trial insert into congruency with the femoral trial. The rotation of the M.B.T. tray trial is usually centred on the junction between the medial and central one-third of the tibial tubercle.



Figure 55

Overall alignment can be confirmed using the two-part alignment rod, attaching it to the tibial alignment handle (Figure 55). The appropriate position is marked with electrocautery on the anterior tibial cortex (Figure 54). Fully flex the knee, and remove the trial components.



# Tibial Preparation - M.B.T.

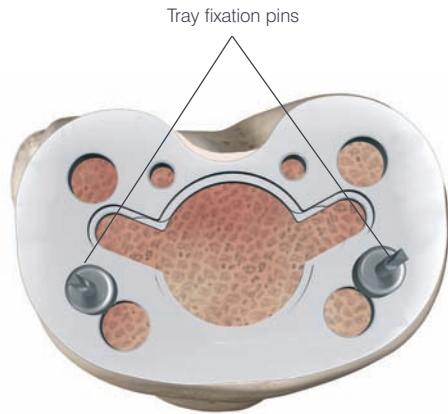


Figure 56



Figure 57



Figure 58

## Tibial Preparation

Align the tibial trial to fit with the tibia for maximum coverage or, if electrocautery marks are present, use these for alignment. Pin the trial with 2 pins as shown. The tray trial allows for standard and M.B.T. keeled components (Figure 56).

Attach the M.B.T. drill tower to the tray trial. Control the tibial reaming depth by inserting the reamer to the appropriate coloured line (Figures 57 and 58). An optional Modular Drill Stop is available to provide a hard stop when reaming. See table for appropriate size.

M.B.T. Tray Size	Line Colour
1-1.5	Green
2-3	Yellow
4-7	Blue

*Note: For cemented preparation, select the "Cemented" instruments, and for non-cemented or line-to-line preparation, select the "Non-Cemented" tibial instruments. The Cemented instruments will prepare for a 1 mm cement mantle around the periphery of the implant.*

# Tibial Preparation - M.B.T.



Figure 59



Figure 60



Figure 61

## Keeled Tray Option

If a keeled M.B.T. tray is to be employed, and the bone of the medial or lateral plateau is sclerotic, it is helpful to initially prepare the keel slot with an oscillating saw or high speed burr. Assemble the M.B.T. keel punch impactor to the appropriately sized M.B.T. keel punch by pressing the side button and aligning the vertical marks on both impactor and keel punch (Figure 59).

Insert assembly into the M.B.T. Drill Tower, taking care to avoid malrotation. Impact the assembly into the cancellous bone until the shoulder of the keel punch impactor is in even contact with the M.B.T. Drill Tower (Figure 60).

**Subvastus tip:** The tibia is subluxed forward with the aid of the pickle-fork retractor and the medial and lateral margins of the tibia are exposed well with 90 degree bent-Hohmann retractors.

## Non-Keeled Tray Option

For a non-keeled tray option attach the M.B.T. punch and follow the same routine (Figure 61).

## Final Trialing Option

A secondary and final trialing step can be performed after tibial preparation. Remove the keel punch impactor from the keel punch by pressing the side button and remove the drill tower as well. Place the trial femoral component on the distal femur. Place the appropriate tibial insert trial onto the tray trial and repeat previous trial evaluation.

# Final Patella Preparation

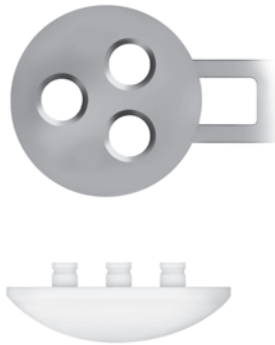


Figure 62



Figure 63



Figure 64



Figure 65

Select a template that most adequately covers the resected surface without overhang (Figure 62).

If used, remove the patella wafer from the patella. Position the template handle on the medial side of the everted patella. Firmly engage the template to the resected surface and drill the holes with the appropriate drill bit (Figure 63).

The patellar implant may now be cemented. Thoroughly cleanse the cut surface with pulsatile lavage. Apply cement to the surface and insert the component. The patellar clamp is designed to fully seat and stabilise the implant as the cement polymerises. Centre the silicon O-ring over the articular surface of the implant and the

metal backing plate against the anterior cortex, avoiding skin entrapment. When snug, close the handles and hold by the ratchet until polymerisation is complete. Remove all extruded cement with a curette. Release the clamp by unlocking the locking switch and squeezing the handle together (Figure 64).

The patella is reduced and the patella implant is evaluated. An unrestricted range of motion, free bearing movement and proper patellar tracking should be evident (Figure 65).

# Cementing Technique



Figure 66

To ensure a continuous cement mantle with good cement interdigitation, prepare the sclerotic bone. This can be done by drilling multiple small holes and cleansing the bone by pulsatile lavage (Figure 66). Any residual small cavity bone defects should be packed with cancellous autograft, allograft or synthetic bone substitutes such as Conduit™ TCP Granules.

***Note: Blood lamination can reduce the mechanical stability of the cement, therefore it is vital to choose a cement which reaches its working phase early.***



Figure 67

Whether mixed by the SmartMix™ Vacuum Mixing Bowl or the SmartMix™ Cemvac® Vacuum Mixing System, SmartSet® GHV Bone Cement offers convenient handling characteristics for the knee cementation process.

A thick layer of cement can be placed either on the bone (Figure 67) or on the implant itself.

# Final Component Implantation

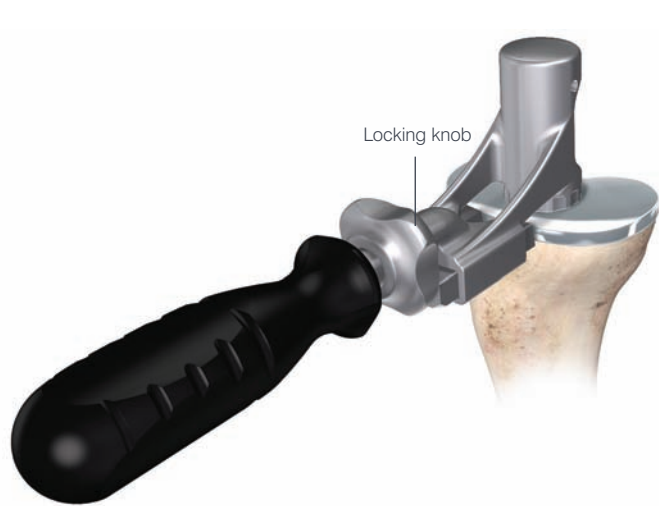


Figure 68

## Tibial Implantation

Attach the M.B.T. tibial impactor by inserting the plastic cone into the implant and tighten by rotating the lock knob clockwise. Carefully insert the tibial tray avoiding malrotation (Figure 68). When fully inserted, several mallet blows may be delivered to the top of the tray inserter. Remove all extruded cement using a curette.

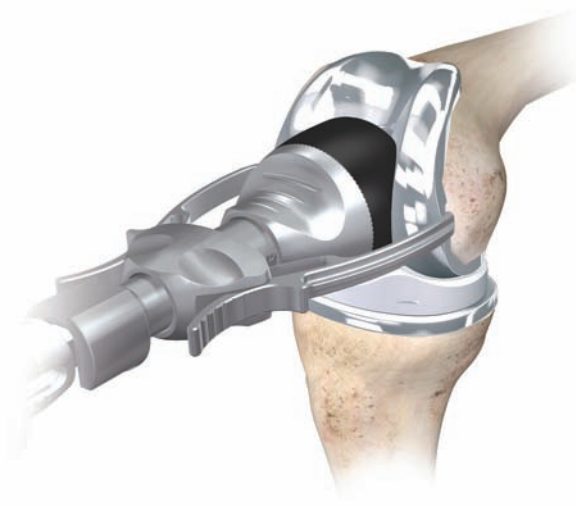


Figure 69

## Polyethylene Implantation

Loose fragments or particulates must be removed from the permanent tibial tray. The appropriate permanent tibial insert can be inserted.

## Femoral Implantation

The femur is hyperflexed and the tibia is subluxed forward. Attach the slaphammer or universal handle to the femoral inserter/extractor. Position the appropriately sized



Figure 70

femoral component on the inserter/extractor by depressing the two triggers to separate the arms and push the femoral component against the conforming poly. Release the triggers so that the arms engage in the slots on the femoral component and rotate the handle clockwise to lock (Figure 69). Extend the knee to approximately 90 degrees for final impaction.

Release the inserter/extractor by rotating the handle counterclockwise and push the two triggers with thumb and index finger. For final femur impaction use the femoral notch impactor to seat the femur component. In Sigma® CS and Sigma® RP-F (not Sigma® CR) cases the impactor can be used in the notch to prevent adverse flexion positioning (Figure 70). Clear any extruded cement using a curette.

# Closure

Release the tourniquet and control bleeding by electrocautery. Place a closed wound suction drain in the suprapatellar pouch and bring out through the lateral retinaculum. Re-approximate the fat pad, quadriceps mechanism, patella tendon, and medial retinaculum with interrupted sutures. Fully rotate the knee from full extension to full flexion to confirm patellar tracking and the integrity of the capsular closure (Figure 71).

Note the final flexion against gravity for postoperative rehabilitation.  
Re-approximate subcutaneous tissues and close the skin with sutures or staples.

**Subvastus tip:** The tourniquet is deflated so that any small bleeders in the subvastus space can be identified and coagulated. The closure of the arthrotomy starts by re-approximating the corner of capsule to the extensor mechanism at the mid-pole of the patella. Then three interrupted zero-Vicryl® sutures are placed along the proximal limb of the arthrotomy.

These sutures can usually be placed deep to the VMO muscle itself and grasp either fibrous tissue or the synovium attached to the distal or undersurface of the VMO instead of the muscle itself. These first four sutures are most easily placed with the knee in extension but are then tied with the knee at 90 degrees of flexion. A deep drain is placed in the knee

joint and the distal/vertical limb of the arthrotomy is closed with multiple interrupted zero-Vicryl® sutures placed with the knee in 90 degrees of flexion. The skin is closed in layers.

To avoid overtightening the medial side and creating an iatrogenic patella baja postoperatively the arthrotomy is closed

with the knee in 90 degrees of flexion. Skin staples are used, not a subcuticular suture. More tension is routinely placed on the skin during small incision TKA surgery than in standard open surgery and the potential for wound healing problems may be magnified if the skin is handled multiple times as is the case with a running subcuticular closure.



Figure 71



# Appendix A: Fixed Bearing Modular Tibial Preparation

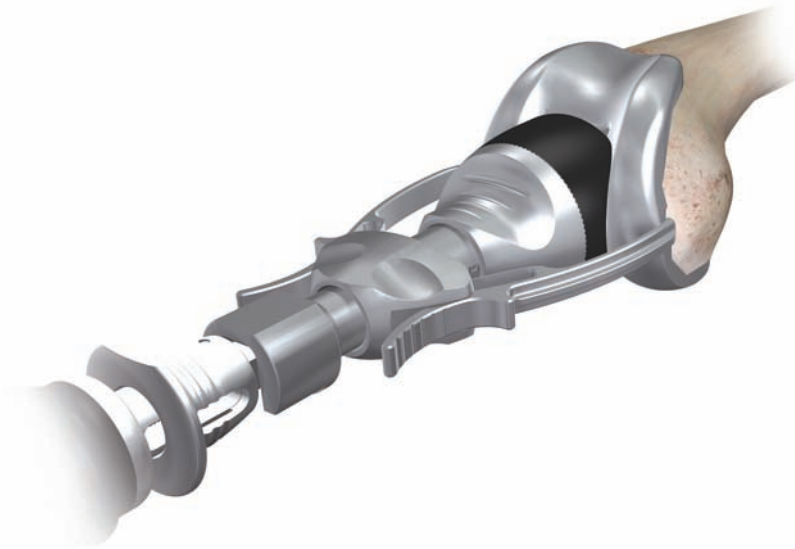


Figure 72

## Femoral Trial

Attach the slaphammer or universal handle to the femoral inserter/extractor. Position the appropriately sized femoral trial on the inserter by depressing the two triggers to separate the arms and push the trial against the conforming poly surface. Release the triggers so that the arms engage in the slots on the femur, and rotate the handle clockwise to lock.

Position the trial onto the femur, impacting as necessary. To detach the inserter from the femur rotate the handle counter-clockwise and push the two triggers with thumb and index finger. Position the femoral trial onto the femur (Figure 72). There are two options available to assess the knee during trial reduction. One or both may be used.

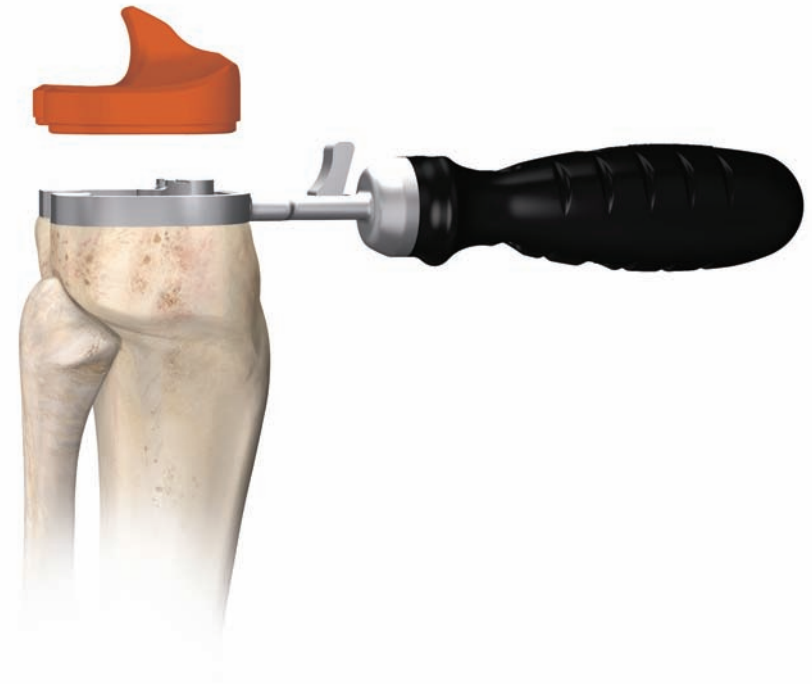


Figure 73

## 1. Trial reduction with trial insert and tray in rotation, or free floating mode.

This option is useful when allowing normal internal / external extension of the tibial components during flexion / extension to dictate optimal placement of the tibial tray. Select the trial bearing size determined during implant planning and insert onto the tray trial.

Place the knee in approximately 90 to 100 degrees of flexion. With the knee in full flexion and the tibia subluxed anteriorly, attach the alignment handle to the tray trial by retracting the lever. Position the tray trial on the resected tibial surface, taking care to maximise the coverage of the tray trial on the proximal tibia (Figure 73).

# Appendix A: Fixed Bearing Modular Tibial Preparation

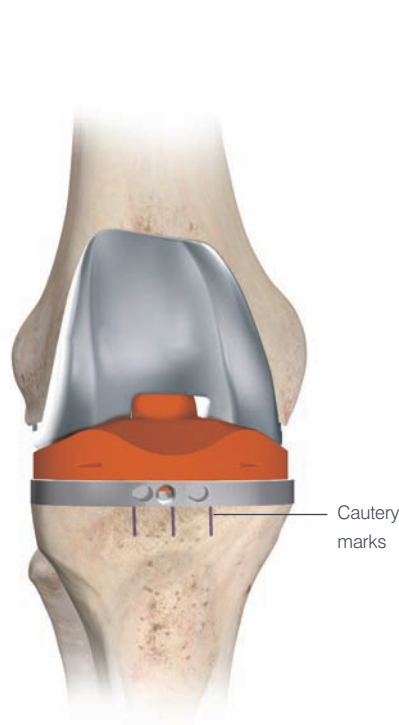


Figure 74

With the trial prostheses in place, the knee is carefully and fully extended, noting medial and lateral stability and overall alignment in the A/P and M/L plane. Where there is any indication of instability, the next greater size tibial insert is substituted and reduction repeated. The insert that gives the greatest stability in flexion and extension and allows full extension is selected.



Figure 75

Where there is a tendency for lateral subluxation or patellar tilt in the absence of medial patellar influence (thumb pressure), lateral retinacular release is indicated. Rotational alignment of the tibial tray is adjusted with the knee in full extension, using the alignment handle to rotate the tray and trial insert into congruency with the femoral trial. The appropriate position is marked with electrocautery on the anterior tibial cortex (Figures 74 and 75).



Figure 76

## 2. Trial reduction with trial insert and tray in fixed, non-rotation mode.

Assess the position of the tray to achieve maximal tibial coverage (align the tibial tray handle with the electrocautery marks, if procedure described in 1) has been followed.) The rotation of the tray trial is usually centred on the junction between the medial and central one-third of the tibial tubercle.

Secure the fixed bearing keel punch impactor to the evaluation bullet and position into the cut-out of the tray trial. Tap down lightly to secure the tray to the proximal tibia (Figure 76).

Carefully remove the tibial tray handle and repeat the trial reduction step from Step 1.

# Appendix A: Fixed Bearing Modular Tibial Preparation



Figure 77

Sigma® Modular & UHMWPE Tray:  
Select the appropriate fixed bearing drill tower, drill bushing, drill and modular keel punch system. Pin the trial with two pins. Remove the alignment handle from the tray trial and assemble the fixed bearing drill tower onto the tray trial (Figure 77).

Fully advance the matching drill through the drill tower into the cancellous bone (Figure 78) to the appropriate line shown in Table below.

**Note:** For cemented preparation, select the “Cemented” instruments, and for non-cemented or line-to-line preparation, select the “Non-Cemented” tibial instruments.



Figure 78

Tray Size	Line Colour
1.5-3	Green
4-5	Yellow
6	Purple



Figure 79

**The Cemented instruments will prepare for a 1 mm cement mantle around the periphery of the implant.**

Insert the fixed bearing keel punch impactor and keel punch through the drill tower and impact until the shoulder of the punch is in contact with the guide (Figure 79). Remove the keel punch impactor by pressing the side button taking care that the punch configuration is preserved.

## Appendix B: Fixed Bearing Standard Tibial Preparation



Figure 80

Sigma® Cruciform Keel Tray: Pin the trial with two pins. Remove the alignment handle from the tray trial and assemble the appropriately sized cruciform keel punch guide to the tray trial (Figure 80).

For cemented preparation, sequentially prepare the tibia starting with the standard punch, followed by the cemented punch. For non-cemented preparation, use the standard punch only (Figure 81).

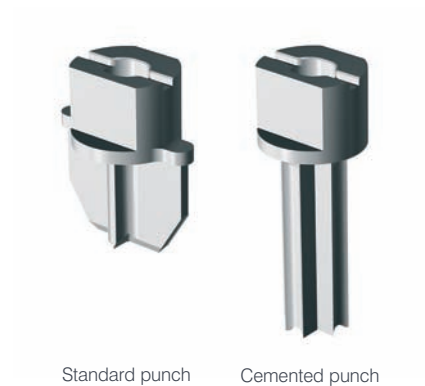


Figure 81

Assemble an appropriately sized standard or cemented keel punch onto the fixed bearing impactor handle. Insert the punch through the guide and impact until the shoulder of the punch is in contact with the guide. Free the stem punch, taking care that the punch configuration is preserved.

## Appendix C: Tibial I.M. Jig Alignment



Figure 82

The entry point for the intramedullary alignment rod is a critical starting point for accurate alignment of the intramedullary alignment system.

In most cases, this point will be centred on the tibial spine in both medial/lateral and anterior/ posterior aspect. In some cases, it may be slightly eccentric.

The knee is flexed maximally, the tibial retractor is inserted over the posterior cruciate ligament and the tibia is subluxed anteriorly. All soft tissue is cleared from the intercondylar area. The tibial spine is resected to the highest level of the least affected tibial condyle.



Figure 83

Position the correct size fixed bearing or mobile bearing tray trial on the proximal tibia to aid in establishing a drill point.

Drill a hole through the tray trial to open the tibia intramedullary canal with the I.M. step drill (Figure 82).

The intramedullary rod is passed down through the medullary canal until the isthmus is firmly engaged (Figure 83).

## Appendix C: Tibial I.M. Jig Alignment



Figure 84

The handle is removed and the I.M. rotation guide is placed over the I.M. rod to define the correct rotational tibia axis, referring to the condylar axis, medial 1/3 of the tibia tubercle and the centre of the ankle (Figure 84). The angle can also be checked relative to the posterior condylar axis by moving the slider forward and rotating it until it is aligned with the posterior condyles. The marks on the rotation guide are in 2 degree increments

and give an indication of the angle between the posterior condylar axis and the chosen rotation.

The rotation can then be marked through the slot on the rotation guide. The rotation guide can then be removed. After the correct rotation has been marked, slide the I.M. tibial jig over the I.M. rod and rotate the I.M. jig until the rotation line on the jig

lines up with the line previously marked using the rotation guide. Assemble the appropriate 3 degree Sigma® HP handed (left/right) or symmetrical tibia cutting block to the HP I.M. tibial jig in line with the marked rotation (Figure 85). A 3-degree cutting block is recommended to compensate for the anterior angled I.M. rod position in the I.M. canal. This will prevent an adverse anterior slope position.

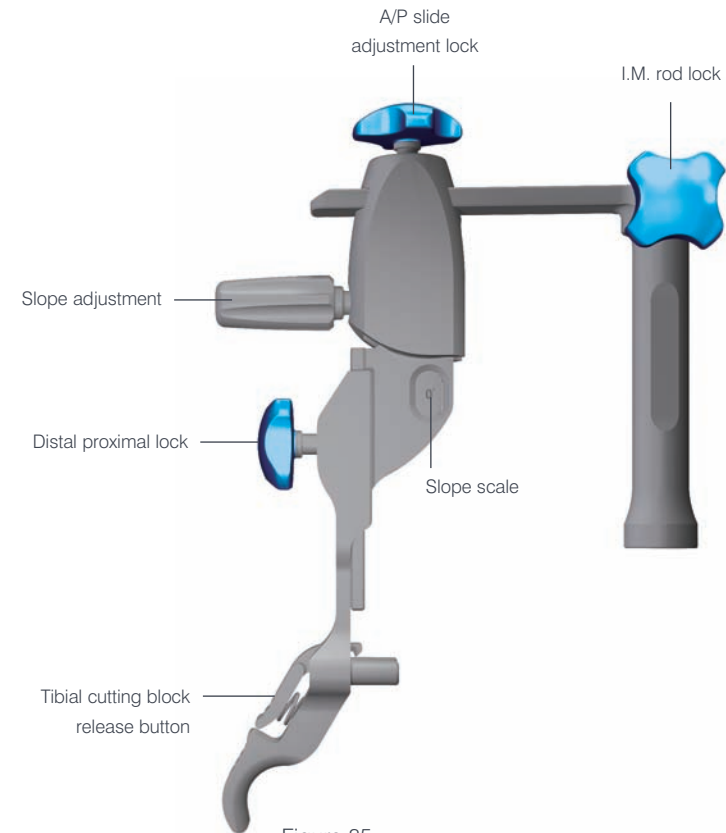


Figure 85

This results in an overall 0 degree position which is recommended for the Sigma® cruciate substituting components. Additional posterior slope can be added through the slope adjustment knob, when using Sigma® cruciate retaining components.

**Note:** The number in the window indicates the amount of **ADDITIONAL SLOPE** that has been added.



## Appendix C: Tibial I.M. Jig Alignment



Figure 86

Slide the appropriate fixed or adjustable stylus in the HP tibial cutting block slot. When measuring from the less damaged side of the tibia plateau set the stylus to 8 mm or 10 mm. If the stylus is placed on the more damaged side of the tibia plateau, set the stylus to 0 mm or 2 mm (Figure 86).

Slide the total construct as close as possible towards the proximal tibia and lock this position.

Adjust the correct degree of slope by rotating the slope adjustment screw. For Sigma® cruciate retaining components a 3-5 degree slope is recommended. For Sigma® cruciate substituting components a 0 degree slope is recommended as previously described. Ensure that the slope scale reads zero. The correct block height can be obtained by unlocking the distal proximal lock and lowering the bottom half of the block until the stylus

is resting on the desired part of the tibia. Lock the device, by turning the distal proximal locking screw, when the correct position has been reached.

After the height has been set, insert two pins through the 0 mm set of holes in the block (the stylus may need to be removed for access). The block can be securely fixed with one extra convergent pin.

+2 and -2 mm pinholes are available on the cutting blocks to further adjust the resection level where needed.

Check the position of the resection block with an external alignment guide before making any cut. Unlock the intramedullary alignment device from the cutting block and remove the I.M. rod.

## Appendix D: Spiked Uprod



Figure 87

Assemble the appropriate 0-3 degree, left/right or symmetrical cutting block to the spiked uprod (Figure 87). Slide the spiked uprod into the ankle clamp assembly.

Place the knee in 90 degrees of flexion with the tibia translated anteriorly and stabilised. Place the ankle clamp proximal

to the malleoli and insert the larger of the two proximal spikes in the centre of the tibial eminence to stabilise the EM alignment device. Loosen the A/P locking knob and position the cutting block roughly against the proximal tibia and lock the knob. Position the cutting block at a rough level of resection and tighten the proximal/distal-sliding knob (Figure 88).



Figure 88

### Varus / valgus

Establish rotational alignment by aligning the tibial Jig ankle clamp parallel to the transmalleolar axis. The midline of the tibia is approximately 3 mm medial to the transaxial midline.

Translate the lower assembly medially (usually to the second vertical mark) by pushing the varus / valgus adjustment wings.

There are vertical scribe marks for reference aligning to the middle of the talus.

## Appendix D: Spiked Uprod



Figure 89



Figure 90

### Slope

The spiked uprod and ankle clamp are designed to prevent an adverse anterior slope. On an average size tibia this guide will give approximately a 0 degree tibial slope when the slope adjustment is translated anteriorly until it hits the stop. In some cases a slight amount of slope will remain (1-2 degrees).

The angle of the tibial slope can be increased to greater than 0 degrees should the patient have a greater natural slope (Figure 89). First unlock the slide locking position and then translate the tibial slope adjuster anteriorly until the desired angle is reached. For a cruciate substituting (CS) design, a 0 degree posterior slope is recommended.

As each patient's anatomy varies, the spiked uprod can be used for both smaller and larger patients. The length of the tibia influences the amount of slope when translating the adapter anteriorly. The 0 degree default position can be overridden by pressing the slope override button and moving the slope adjustment closer to the ankle (Figure 89).

On the spiked uprod 5, 6 and 7 zones are present, which correspond to the length of the tibia. These markings can be used to fine tune the amount of slope.

When the spiked uprod shows a larger mark 7 zone, this indicates that when the lower assembly is translated 7 mm anterior, it will give an additional 1 degree of posterior slope (Figure 90).

## Appendix D: Spiked Uprod

### Height

Loosen the proximal / distal sliding knob, insert the adjustable tibial stylus into the cutting block, and adjust to the correct level of resection. When measuring from the less damaged side of the tibial plateau, set the stylus to 8 mm or 10 mm. If the stylus is placed on the more damaged side of the tibial plateau, set the stylus to 0 mm or 2 mm.

Adjustment of resection height on the stylus should be done outside the joint space before locating the stylus in the cutting block. If planning to resect through the slot, position the foot of the tibial stylus marked "slotted" into the slot of the tibial cutting block (Figure 91). If planning to resect on top of the cutting block, place the foot marked "non-slotted" into the cutting slot. Move the block and stylus assembly so that the stylus touches the desired point on the tibia. Care should be taken with severe valgus deformity, not to over resect the tibia.

### Tibial Resection

After the height has been set, lock the proximal / distal sliding knob and pin the block through the 0 mm set of holes (the stylus may need to be removed for access). +2 and -2 mm pinholes are available on the resection blocks to further adjust the resection level where needed. The block can be securely fixed with one extra convergent pin.

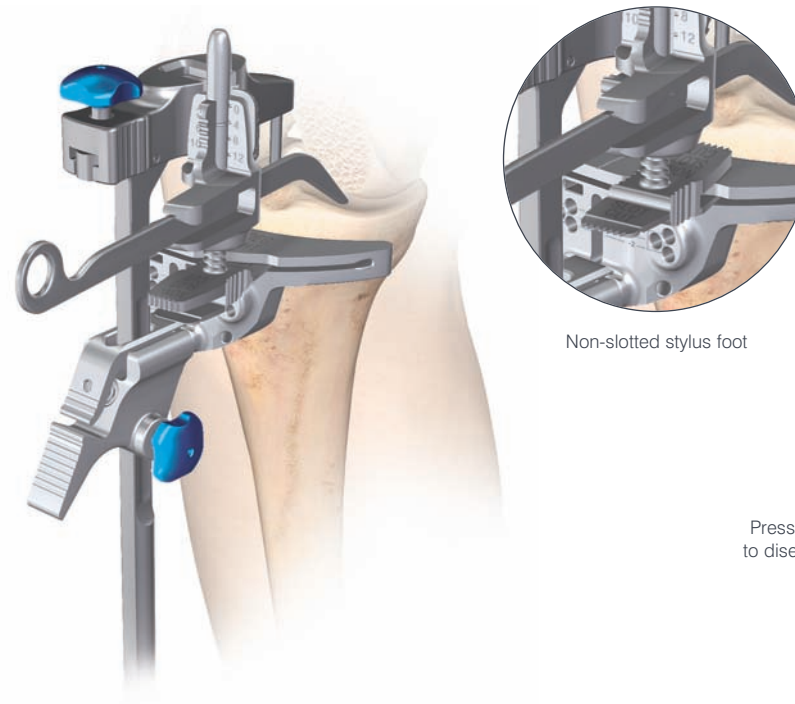


Figure 91

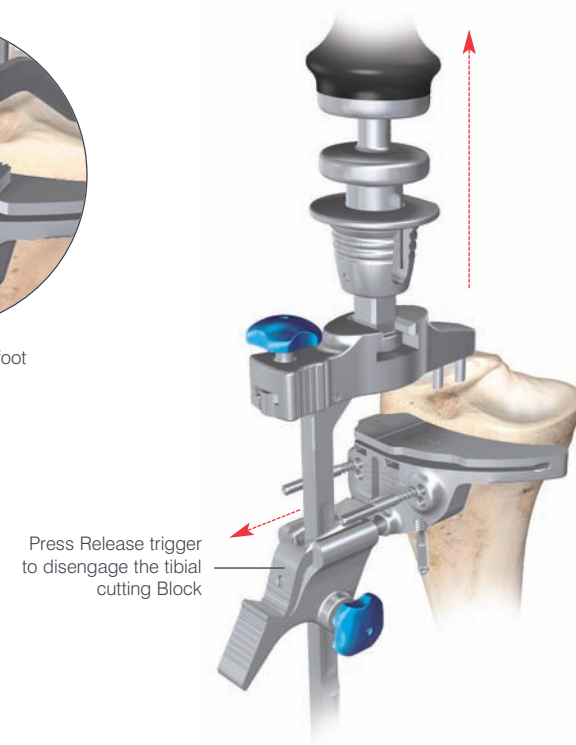


Figure 92

### Spiked Uprod Removal

1. Loosen the proximal distal sliding knob.
2. Connect the slap-hammer to the top of the spiked uprod and disengage the spikes from the proximal tibia.
3. Press the cutting block release button to disengage from the cutting block.

Remove the tibial jig and perform the appropriate resection (Figure 92).

# Ordering Information

Product Code      Description

## Tibia Resection

950501228	HP EM Tibial Jig Uprod
950501229	HP EM Tibial Jig Ankle Clamp
950501202	HP IM Tibia Rotation Guide
950501203	HP IM Tibia Jig
950501204	Sigma® HP 0 degree Symmetrical Cut Block
950501222	Sigma® HP 0 degree Left Cut Block
950501223	Sigma® HP 0 degree Right Cut Block
950501205	Sigma® HP 3 degree Symmetrical Cut Block
950501224	Sigma® HP 3 degree Left Cut Block
950501225	Sigma® HP 3 degree Right Cut Block
950501209	Sigma® HP Adj Tibial Stylus

## Femoral Resection

992011	IM Rod Handle
966121	IM Rod 300 mm
950502079	HP Step IM Reamer
950501234	Sigma® HP Distal Femoral Align Guide
950501235	Sigma® HP Distal Femoral Resection Guide
950501238	Sigma® HP Distal Femoral Connector
950501236	Sigma® HP Distal Femoral Block
950501307	HP Alignment Tower
950501207	HP Alignment Rod
966530	Reference Guide

## Measured Fixed Femoral Sizing and Rotation

950501263	Sigma® HP Fixed Reference Femoral Sizer
950501264	HP Fixed Reference Posterior Rotation Guide 0 degrees
950501265	HP Fixed Reference Posterior Rotation Guide 3 degrees
950501266	HP Fixed Reference Posterior Rotation Guide 5 degrees
950501267	HP Fixed Reference Posterior Rotation Guide 7 degrees
950501268	HP Fixed Reference Anterior Rotation Guide 0 degrees
950501269	HP Fixed Reference Anterior Rotation Guide 3 degrees
950501270	HP Fixed Reference Anterior Rotation Guide 5 degrees
950501271	HP Fixed Reference Anterior Rotation Guide 7 degrees

## RP-F

950502159	RP-F HP Fixed Reference AP Block Size 1
950502160	RP-F HP Fixed Reference AP Block Size 1.5
950502161	RP-F HP Fixed Reference AP Block Size 2
950502162	RP-F HP Fixed Reference AP Block Size 2.5
950502163	RP-F HP Fixed Reference AP Block Size 3
950502164	RP-F HP Fixed Reference AP Block Size 4
950502165	RP-F HP Fixed Reference AP Block Size 5
950502166	RP-F HP Fixed Reference AP Block Size 6
950502167	Sigma® RP-F HP Femoral Notch Guide Size 1
950502168	Sigma® RP-F HP Femoral Notch Guide Size 1.5
950502169	Sigma® RP-F HP Femoral Notch Guide Size 2
950502170	Sigma® RP-F HP Femoral Notch Guide Size 2.5
950502171	Sigma® RP-F HP Femoral Notch Guide Size 3
950502172	Sigma® RP-F HP Femoral Notch Guide Size 4
950502173	Sigma® RP-F HP Femoral Notch Guide Size 5
950502174	Sigma® RP-F HP Femoral Notch Guide Size 6

# Ordering Information

## Fixed Bearing Preparation

950502040	Sigma® HP FBT Tray Trial Size 1.5
950502041	Sigma® HP FBT Tray Trial Size 2
950502042	Sigma® HP FBT Tray Trial Size 2.5
950502043	Sigma® HP FBT Tray Trial Size 3
950502044	Sigma® HP FBT Tray Trial Size 4
950502045	Sigma® HP FBT Tray Trial Size 5
950502046	Sigma® HP FBT Tray Trial Size 6
950502053	Sigma® HP FBT Evaluation Bullet 1.5-3
950502054	Sigma® HP FBT Evaluation Bullet 4-6
950502055	Sigma® HP FBT Keel Punch Impact
950502060	Sigma® HP FBT Drill Tower
217830123	M.B.T. Tray Fixation Pins
950502028	HP Tibial Tray Handle
950502068	FBT Modular Drill Stop

## Standard Tray Preparation

950502061	HP FBT Standard Tibial Punch Guide Size 1.5-4
950502062	HP FBT Standard Tibial Punch Guide Size 5-6
950502063	HP FBT Standard Tibial Punch Size 1.5-2
950502064	HP FBT Standard Tibial Punch Size 2.5-4
950502065	HP FBT Standard Tibial Punch Size 5-6
950502066	HP FBT Standard Cm Tibial Punch Size 1.5-2
950502067	HP FBT Standard Cm Tibial Punch Size 2.5-6

## Modular Tray Preparation

950502047	HP FBT Cemented Keel Punch Size 1.5-3
950502048	HP FBT Cemented Keel Punch Size 4-5
950502049	HP FBT Cemented Keel Punch Size 6

950502056	Sigma® HP FBT Cemented Drill Size 1.5-3
950502057	Sigma® HP FBT Cemented Drill Size 4-6
950502050	HP FBT Non-Cemented KI Punch Size 1.5-3
950502051	HP FBT Non-Cemented KI Punch Size 4-5
950502058	HP FBT Non-Cemented Drill Size 1.5-3
950502059	HP FBT Non-Cemented Drill Size 4-6
950502052	HP FBT Non-Cemented KI Punch Size 6

## Fixed Bearing Preparation

950502000	HP M.B.T. Tray Trial Size 1
950502001	HP M.B.T. Tray Trial Size 1.5
950502002	HP M.B.T. Tray Trial Size 2
950502003	HP M.B.T. Tray Trial Size 2.5
950502004	HP M.B.T. Tray Trial Size 3
950502006	HP M.B.T. Tray Trial Size 4
950502007	HP M.B.T. Tray Trial Size 5
950502008	HP M.B.T. Tray Trial Size 6
950502009	HP M.B.T. Tray Trial Size 7
950502022	HP M.B.T. Spiked Evaluation Bullet Size 1-3
950502023	HP M.B.T. Spiked Evaluation Bullet Size 4-7
950502099	M.B.T. Evaluation Bullet Size 1-3"
950502098	M.B.T. Evaluation Bullet Size 4-7"
950502027	HP M.B.T. Drill Tower
950502024	HP M.B.T. Keel Punch Impact
217830123	M.B.T. Tray Fixation Pins
950502028	HP Tibial Tray Handle
950502029	M.B.T. Modular Drill Stop
950502038	M.B.T. Central Stem Punch
217830137	M.B.T. RP Trial Button



# Ordering Information

## M.B.T. Keeled Preparation

950502025	HP M.B.T. Cemented Central Drill
950502010	HP M.B.T. Cemented Keel Punch Size 1-1.5
950502011	HP M.B.T. Cemented Keel Punch Size 2-3
950502012	HP M.B.T. Cemented Keel Punch Size 4-7
950502026	HP M.B.T. Non Cemented Central Drill
950502013	HP M.B.T. Non-Cemented KI Punch Size 1-1.5
950502014	HP M.B.T. Non-Cemented KI Punch Size 2-3
950502015	HP M.B.T. Non-Cemented KI Punch Size 4-7

## M.B.T. Non Keeled Preparation

950502025	HP M.B.T. Cemented Central Drill
950502016	HP M.B.T. Cemented Punch Size 1-1.5
950502017	HP M.B.T. Cemented Punch Size 2-3
950502018	HP M.B.T. Cemented Punch Size 4-7
950502026	HP M.B.T. Non-Cemented Central Drill
950502019	HP M.B.T. Non-Cemented Punch Size 1-1.5
950502020	HP M.B.T. Non-Cemented Punch Size 2-3
950502021	HP M.B.T. Non-Cemented Punch Size 4-7

## M.B.T. DuoFix™ Preparation

950502030	HP DuoFix™ Tibial BLeft Size 1-1.5
950502031	HP DuoFix™ Tibial BLeft Size 2-3.5
950502032	HP DuoFix™ Tibial BLeft Size 4-7
950502034	HP DuoFix™ Tibial Central Drill
950502005	HP M.B.T. Tray Trial Size 3.5
950502039	HP M.B.T. Tray Trial Size 4.5
900335000	DuoFix™ Peg Drill

## Femoral Trials

961007	Sigma® Femur CR Femur Trial Size 1.5 Left
961002	Sigma® Femur CR Femur Trial Size 2 Left
961008	Sigma® Femur CR Femur Trial Size 2.5 Left
961003	Sigma® Femur CR Femur Trial Size 3 Left
961004	Sigma® Femur CR Femur Trial Size 4 Left
961005	Sigma® Femur CR Femur Trial Size 5 Left
961006	Sigma® Femur CR Femur Trial Size 6 Left
961017	Sigma® Femur CR Femur Trial Size 1.5 Right
961012	Sigma® Femur CR Femur Trial Size 2 Right
961018	Sigma® Femur CR Femur Trial Size 2.5 Right
961013	Sigma® Femur CR Femur Trial Size 3 Right
961014	Sigma® Femur CR Femur Trial Size 4 Right
961015	Sigma® Femur CR Femur Trial Size 5 Right
961016	Sigma® Femur CR Femur Trial Size 6 Right
966200	Distal Femoral Lug Drill
961047	Sigma® Femur CS Box Trial Size 1.5
961042	Sigma® Femur CS Box Trial Size 2
961048	Sigma® Femur CS Box Trial Size 2.5
961043	Sigma® Femur CS Box Trial Size 3
961044	Sigma® Femur CS Box Trial Size 4
961045	Sigma® Femur CS Box Trial Size 5
961046	Sigma® Femur CS Box Trial Size 6
966295	SP2 Femur Box Trial Screwdriver

# Ordering Information

## RP-F Femoral Trials

954210	RP-F Trial Femur Size 1 Left
954211	RP-F Trial Femur Size 1.5 Left
954212	RP-F Trial Femur Size 2 Left
954213	RP-F Trial Femur Size 2.5 Left
954214	RP-F Trial Femur Size 3 Left
954215	RP-F Trial Femur Size 4 Left
954216	RP-F Trial Femur Size 5 Left
954217	RP-F Trial Femur Size 6 Left
954220	RP-F Trial Femur Size 1 Right
954221	RP-F Trial Femur Size 1.5 Right
954222	RP-F Trial Femur Size 2 Right
954223	RP-F Trial Femur Size 2.5 Right
954224	RP-F Trial Femur Size 3 Right
954225	RP-F Trial Femur Size 4 Right
954226	RP-F Trial Femur Size 5 Right
954227	RP-F Trial Femur Size 6 Right

## Fixed Bearing Insert Trials

### Posterior Lipped

961210	Sigma® PLI Tibial Insert Trial Size 1.5 8 mm
961211	Sigma® PLI Tibial Insert Trial Size 1.5 10 mm
961212	Sigma® PLI Tibial Insert Trial Size 1.5 12.5 mm
961213	Sigma® PLI Tibial Insert Trial Size 1.5 15 mm
961214	Sigma® PLI Tibial Insert Trial Size 1.5 17.5 mm
961215	Sigma® PLI Tibial Insert Trial Size 1.5 20 mm
961220	Sigma® PLI Tibial Insert Trial Size 2 8 mm

961221	Sigma® PLI Tibial Insert Trial Size 2 10 mm
961222	Sigma® PLI Tibial Insert Trial Size 2 12.5 mm
961223	Sigma® PLI Tibial Insert Trial Size 2 15 mm
961224	Sigma® PLI Tibial Insert Trial Size 2 17.5 mm
961225	Sigma® PLI Tibial Insert Trial Size 2 20 mm
961230	Sigma® PLI Tibial Insert Trial Size 2.5 8 mm
961231	Sigma® PLI Tibial Insert Trial Size 2.5 10 mm
961232	Sigma® PLI Tibial Insert Trial Size 2.5 12.5 mm
961233	Sigma® PLI Tibial Insert Trial Size 2.5 15 mm
961234	Sigma® PLI Tibial Insert Trial Size 2.5 17.5 mm
961235	Sigma® PLI Tibial Insert Trial Size 2.5 20 mm
961240	Sigma® PLI Tibial Insert Trial Size 3 8 mm
961241	Sigma® PLI Tibial Insert Trial Size 3 10 mm
961242	Sigma® PLI Tibial Insert Trial Size 3 12.5 mm
961243	Sigma® PLI Tibial Insert Trial Size 3 15 mm
961244	Sigma® PLI Tibial Insert Trial Size 3 17.5 mm
961245	Sigma® PLI Tibial Insert Trial Size 3 20 mm
961250	Sigma® PLI Tibial Insert Trial Size 4 8 mm
961251	Sigma® PLI Tibial Insert Trial Size 4 10 mm
961252	Sigma® PLI Tibial Insert Trial Size 4 12.5 mm
961253	Sigma® PLI Tibial Insert Trial Size 4 15 mm
961254	Sigma® PLI Tibial Insert Trial Size 4 17.5 mm
961255	Sigma® PLI Tibial Insert Trial Size 4 20 mm
961260	Sigma® PLI Tibial Insert Trial Size 5 8 mm
961261	Sigma® PLI Tibial Insert Trial Size 5 10 mm
961262	Sigma® PLI Tibial Insert Trial Size 5 12.5 mm

# Ordering Information

961263	Sigma® PLI Tibial Insert Trial Size 5 15 mm
961264	Sigma® PLI Tibial Insert Trial Size 5 17.5 mm
961265	Sigma® PLI Tibial Insert Trial Size 5 20 mm
961270	Sigma® PLI Tibial Insert Trial Size 6 8 mm
961271	Sigma® PLI Tibial Insert Trial Size 6 10 mm
961272	Sigma® PLI Tibial Insert Trial Size 6 12.5 mm
961273	Sigma® PLI Tibial Insert Trial Size 6 15 mm
961274	Sigma® PLI Tibial Insert Trial Size 6 17.5 mm
961275	Sigma® PLI Tibial Insert Trial Size 6 20 mm

## Curved

961320	Sigma® Curved Tibial Insert Trial Size 1.5 8 mm
961321	Sigma® Curved Tibial Insert Trial Size 1.5 10 mm
961322	Sigma® Curved Tibial Insert Trial Size 1.5 12.5 mm
961323	Sigma® Curved Tibial Insert Trial Size 1.5 15 mm
961324	Sigma® Curved Tibial Insert Trial Size 1.5 17.5 mm
961325	Sigma® Curved Tibial Insert Trial Size 1.5 20 mm
961330	Sigma® Curved Tibial Insert Trial Size 2 8 mm
961331	Sigma® Curved Tibial Insert Trial Size 2 10 mm
961332	Sigma® Curved Tibial Insert Trial Size 2 12.5 mm
961333	Sigma® Curved Tibial Insert Trial Size 2 15 mm
961334	Sigma® Curved Tibial Insert Trial Size 2 17.5 mm
961335	Sigma® Curved Tibial Insert Trial Size 2 20 mm
961340	Sigma® Curved Tibial Insert Trial Size 2.5 8 mm
961341	Sigma® Curved Tibial Insert Trial Size 2.5 10 mm
961342	Sigma® Curved Tibial Insert Trial Size 2.5 12.5 mm

961343	Sigma® Curved Tibial Insert Trial Size 2.5 15 mm
961344	Sigma® Curved Tibial Insert Trial Size 2.5 17.5 mm
961345	Sigma® Curved Tibial Insert Trial Size 2.5 20 mm
961350	Sigma® Curved Tibial Insert Trial Size 3 8 mm
961351	Sigma® Curved Tibial Insert Trial Size 3 10 mm
961352	Sigma® Curved Tibial Insert Trial Size 3 12.5 mm
961353	Sigma® Curved Tibial Insert Trial Size 3 15 mm
961354	Sigma® Curved Tibial Insert Trial Size 3 17.5 mm
961355	Sigma® Curved Tibial Insert Trial Size 3 20 mm
961360	Sigma® Curved Tibial Insert Trial Size 4 8 mm
961361	Sigma® Curved Tibial Insert Trial Size 4 10 mm
961362	Sigma® Curved Tibial Insert Trial Size 4 12.5 mm
961363	Sigma® Curved Tibial Insert Trial Size 4 15 mm
961364	Sigma® Curved Tibial Insert Trial Size 4 17.5 mm
961365	Sigma® Curved Tibial Insert Trial Size 4 20 mm
961370	Sigma® Curved Tibial Insert Trial Size 5 8 mm
961371	Sigma® Curved Tibial Insert Trial Size 5 10 mm
961372	Sigma® Curved Tibial Insert Trial Size 5 12.5 mm
961373	Sigma® Curved Tibial Insert Trial Size 5 15 mm
961374	Sigma® Curved Tibial Insert Trial Size 5 17.5 mm
961375	Sigma® Curved Tibial Insert Trial Size 5 20 mm
961380	Sigma® Curved Tibial Insert Trial Size 6 8 mm
961381	Sigma® Curved Tibial Insert Trial Size 6 10 mm
961382	Sigma® Curved Tibial Insert Trial Size 6 12.5 mm
961383	Sigma® Curved Tibial Insert Trial Size 6 15 mm
961384	Sigma® Curved Tibial Insert Trial Size 6 17.5 mm
961385	Sigma® Curved Tibial Insert Trial Size 6 20 mm

# Ordering Information

## Stabilised

961410	Sigma® Stabilised Tibial Insert Trial Size 1.5 8 mm	961445	Sigma® Stabilised Tibial Insert Trial Size 3 20 mm
961411	Sigma® Stabilised Tibial Insert Trial Size 1.5 10 mm	961446	Sigma® Stabilised Tibial Insert Trial Size 3 22.5 mm
961412	Sigma® Stabilised Tibial Insert Trial Size 1.5 12.5 mm	961447	Sigma® Stabilised Tibial Insert Trial Size 3 25 mm
961413	Sigma® Stabilised Tibial Insert Trial Size 1.5 15 mm	961450	Sigma® Stabilised Tibial Insert Trial Size 4 8 mm
961414	Sigma® Stabilised Tibial Insert Trial Size 1.5 17.5 mm	961451	Sigma® Stabilised Tibial Insert Trial Size 4 10 mm
961420	Sigma® Stabilised Tibial Insert Trial Size 2 8 mm	961452	Sigma® Stabilised Tibial Insert Trial Size 4 12.5 mm
961421	Sigma® Stabilised Tibial Insert Trial Size 2 10 mm	961453	Sigma® Stabilised Tibial Insert Trial Size 4 15 mm
961422	Sigma® Stabilised Tibial Insert Trial Size 2 12.5 mm	961454	Sigma® Stabilised Tibial Insert Trial Size 4 17.5 mm
961423	Sigma® Stabilised Tibial Insert Trial Size 2 15 mm	961455	Sigma® Stabilised Tibial Insert Trial Size 4 20 mm
961424	Sigma® Stabilised Tibial Insert Trial Size 2 17.5 mm	961456	Sigma® Stabilised Tibial Insert Trial Size 4 22.5 mm
961425	Sigma® Stabilised Tibial Insert Trial Size 2 20 mm	961457	Sigma® Stabilised Tibial Insert Trial Size 4 25 mm
961426	Sigma® Stabilised Tibial Insert Trial Size 2 22.5 mm	961460	Sigma® Stabilised Tibial Insert Trial Size 5 8 mm
961427	Sigma® Stabilised Tibial Insert Trial Size 2 25 mm	961461	Sigma® Stabilised Tibial Insert Trial Size 5 10 mm
961430	Sigma® Stabilised Tibial Insert Trial Size 2.5 8 mm	961462	Sigma® Stabilised Tibial Insert Trial Size 5 12.5 mm
961431	Sigma® Stabilised Tibial Insert Trial Size 2.5 10 mm	961463	Sigma® Stabilised Tibial Insert Trial Size 5 15 mm
961432	Sigma® Stabilised Tibial Insert Trial Size 2.5 12.5 mm	961464	Sigma® Stabilised Tibial Insert Trial Size 5 17.5 mm
961433	Sigma® Stabilised Tibial Insert Trial Size 2.5 15 mm		
961434	Sigma® Stabilised Tibial Insert Trial Size 2.5 17.5 mm		
961435	Sigma® Stabilised Tibial Insert Trial Size 2.5 20 mm		
961436	Sigma® Stabilised Tibial Insert Trial Size 2.5 22.5 mm		
961437	Sigma® Stabilised Tibial Insert Trial Size 2.5 25 mm		
961440	Sigma® Stabilised Tibial Insert Trial Size 3 8 mm		
961441	Sigma® Stabilised Tibial Insert Trial Size 3 10 mm		
961442	Sigma® Stabilised Tibial Insert Trial Size 3 12.5 mm		
961443	Sigma® Stabilised Tibial Insert Trial Size 3 15 mm		
961444	Sigma® Stabilised Tibial Insert Trial Size 3 17.5 mm		

# Ordering Information

961465	Sigma® Stabilised Tibial Insert Trial Size 5 20 mm
961466	Sigma® Stabilised Tibial Insert Trial Size 5 22.5 mm
961467	Sigma® Stabilised Tibial Insert Trial Size 5 25 mm
961470	Sigma® Stabilised Tibial Insert Trial Size 6 8 mm
961471	Sigma® Stabilised Tibial Insert Trial Size 6 10 mm
961472	Sigma® Stabilised Tibial Insert Trial Size 6 12.5 mm
961473	Sigma® Stabilised Tibial Insert Trial Size 6 15 mm
961474	Sigma® Stabilised Tibial Insert Trial Size 6 17.5 mm
961475	Sigma® Stabilised Tibial Insert Trial Size 6 20 mm
961476	Sigma® Stabilised Tibial Insert Trial Size 6 22.5 mm
961477	Sigma® Stabilised Tibial Insert Trial Size 6 25 mm

## Mobile Bearing Insert Trials

### RP Curved

973001	Sigma® RP Curved Tibial Insert Trial Size 1.5 10 mm
973002	Sigma® RP Curved Tibial Insert Trial Size 1.5 12.5 mm
973003	Sigma® RP Curved Tibial Insert Trial Size 1.5 15.0 mm
973004	Sigma® RP Curved Tibial Insert Trial Size 1.5 17.5 mm
963011	Sigma® RP Curved Tibial Insert Trial Size 2 10 mm
963012	Sigma® RP Curved Tibial Insert Trial Size 2 12.5 mm
963013	Sigma® RP Curved Tibial Insert Trial Size 2 15.0 mm
963014	Sigma® RP Curved Tibial Insert Trial Size 2 17.5 mm
963021	Sigma® RP Curved Tibial Insert Trial Size 2.5 10 mm
963022	Sigma® RP Curved Tibial Insert Trial Size 2.5 12.5 mm
963023	Sigma® RP Curved Tibial Insert Trial Size 2.5 15.0 mm
963024	Sigma® RP Curved Tibial Insert Trial Size 2.5 17.5 mm

963031	Sigma® RP Curved Tibial Insert Trial Size 3 10 mm
963032	Sigma® RP Curved Tibial Insert Trial Size 3 12.5 mm
963033	Sigma® RP Curved Tibial Insert Trial Size 3 15.0 mm
963034	Sigma® RP Curved Tibial Insert Trial Size 3 17.5 mm
963041	Sigma® RP Curved Tibial Insert Trial Size 4 10 mm
963042	Sigma® RP Curved Tibial Insert Trial Size 4 12.5 mm
963043	Sigma® RP Curved Tibial Insert Trial Size 4 15.0 mm
963044	Sigma® RP Curved Tibial Insert Trial Size 4 17.5 mm
963051	Sigma® RP Curved Tibial Insert Trial Size 5 10 mm
963052	Sigma® RP Curved Tibial Insert Trial Size 5 12.5 mm
963053	Sigma® RP Curved Tibial Insert Trial Size 5 15.0 mm
963054	Sigma® RP Curved Tibial Insert Trial Size 5 17.5 mm
963061	Sigma® RP Curved Tibial Insert Trial Size 6 10 mm
963062	Sigma® RP Curved Tibial Insert Trial Size 6 12.5 mm
963063	Sigma® RP Curved Tibial Insert Trial Size 6 15.0 mm
963064	Sigma® RP Curved Tibial Insert Trial Size 6 17.5 mm

### RP Stabilised

973101	Sigma® RP Stabilised Tibial Insert Trial Size 1.5 10.0 mm
973102	Sigma® RP Stabilised Tibial Insert Trial Size 1.5 12.5 mm
973103	Sigma® RP Stabilised Tibial Insert Trial Size 1.5 15.0 mm
973104	Sigma® RP Stabilised Tibial Insert Trial Size 1.5 17.5 mm
963105	Sigma® RP Stabilised Tibial Insert Trial Size 1.5 20.0 mm
963111	Sigma® RP Stabilised Tibial Insert Trial Size 2 10.0 mm
963112	Sigma® RP Stabilised Tibial Insert Trial Size 2 12.5 mm
963113	Sigma® RP Stabilised Tibial Insert Trial Size 2 15.0 mm

# Ordering Information

963114	Sigma® RP Stabilised Tibial Insert Trial Size 2 17.5 mm
963115	Sigma® RP Stabilised Tibial Insert Trial Size 2 20.0 mm
963116	Sigma® RP Stabilised Tibial Insert Trial Size 2 22.5. mm
963117	Sigma® RP Stabilised Tibial Insert Trial Size 2 25 mm
963121	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 10.0 mm
963122	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 12.5 mm
963123	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 15.0 mm
963124	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 17.5 mm
963125	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 20.0 mm
963126	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 22.5 mm
963127	Sigma® RP Stabilised Tibial Insert Trial Size 2.5 25 mm
963131	Sigma® RP Stabilised Tibial Insert Trial Size 3 10.0 mm
963132	Sigma® RP Stabilised Tibial Insert Trial Size 3 12.5 mm
963133	Sigma® RP Stabilised Tibial Insert Trial Size 3 15.0 mm
963134	Sigma® RP Stabilised Tibial Insert Trial Size 3 17.5 mm
963135	Sigma® RP Stabilised Tibial Insert Trial Size 3 20.0 mm
963136	Sigma® RP Stabilised Tibial Insert Trial Size 3 22.5. mm
963137	Sigma® RP Stabilised Tibial Insert Trial Size 3 25 mm
963141	Sigma® RP Stabilised Tibial Insert Trial Size 4 10.0 mm
963142	Sigma® RP Stabilised Tibial Insert Trial Size 4 12.5 mm
963143	Sigma® RP Stabilised Tibial Insert Trial Size 4 15.0 mm
963144	Sigma® RP Stabilised Tibial Insert Trial Size 4 17.5 mm
963145	Sigma® RP Stabilised Tibial Insert Trial Size 4 20.0 mm
963146	Sigma® RP Stabilised Tibial Insert Trial Size 4 22.5. mm
963147	Sigma® RP Stabilised Tibial Insert Trial Size 4 25 mm
963151	Sigma® RP Stabilised Tibial Insert Trial Size 5 10.0 mm

963152	Sigma® RP Stabilised Tibial Insert Trial Size 5 12.5 mm
963153	Sigma® RP Stabilised Tibial Insert Trial Size 5 15.0 mm
963154	Sigma® RP Stabilised Tibial Insert Trial Size 5 17.5 mm
963155	Sigma® RP Stabilised Tibial Insert Trial Size 5 20.0 mm
963156	Sigma® RP Stabilised Tibial Insert Trial Size 5 22.5. mm
963157	Sigma® RP Stabilised Tibial Insert Trial Size 5 25 mm
963161	Sigma® RP Stabilised Tibial Insert Trial Size 6 10.0 mm
963162	Sigma® RP Stabilised Tibial Insert Trial Size 6 12.5 mm
963163	Sigma® RP Stabilised Tibial Insert Trial Size 6 15.0 mm
963164	Sigma® RP Stabilised Tibial Insert Trial Size 6 17.5 mm
963165	Sigma® RP Stabilised Tibial Insert Trial Size 6 20.0 mm
963166	Sigma® RP Stabilised Tibial Insert Trial Size 6 22.5. mm
963167	Sigma® RP Stabilised Tibial Insert Trial Size 6 25 mm

## RP-F

954110	RP-F Tibial Insert Trial 10 mm Size 1
954111	RP-F Tibial Insert Trial 12.5 mm Size1
954112	RP-F Tibial Insert Trial 15 mm Size 1
954113	RP-F Tibial Insert Trial 17.5 mm Size 1
954114	RP-F Tibial Insert Trial 10 mm Size 1.5
954115	RP-F Tibial Insert Trial 12.5 mm Size 1.5
954116	RP-F Tibial Insert Trial 15 mm Size 1.5
954117	RP-F Tibial Insert Trial 17.5 mm Size 1.5
954120	RP-F Tibial Insert Trial 10 mm Size 2
954121	RP-F Tibial Insert Trial 12.5 mm Size 2
954122	RP-F Tibial Insert Trial 15 mm Size 2



# Ordering Information

954123	RP-F Tibial Insert Trial 17.5 mm Size 2
954125	RP-F Tibial Insert Trial 10 mm Size 2.5
954126	RP-F Tibial Insert Trial 12.5 mm Size 2.5
954127	RP-F Tibial Insert Trial 15 mm Size 2.5
954128	RP-F Tibial Insert Trial 17.5 mm Size 2.5
954130	RP-F Tibial Insert Trial 10 mm Size 3
954131	RP-F Tibial Insert Trial 12.5 mm Size 3
954132	RP-F Tibial Insert Trial 15 mm Size 3
954133	RP-F Tibial Insert Trial 17.5 mm Size 3
954140	RP-F Tibial Insert Trial 10 mm Size 4
954141	RP-F Tibial Insert Trial 12.5 mm Size 4
954142	RP-F Tibial Insert Trial 15 mm Size 4
954143	RP-F Tibial Insert Trial 17.5 mm Size 4
954150	RP-F Tibial Insert Trial 10 mm Size 5
954151	RP-F Tibial Insert Trial 12.5 mm Size 5
954152	RP-F Tibial Insert Trial 15 mm Size 5
954153	RP-F Tibial Insert Trial 17.5 mm Size 5
954160	RP-F Tibial Insert Trial 10 mm Size 6
654161	RP-F Tibial Insert Trial 12.5 mm Size 6
954162	RP-F Tibial Insert Trial 15 mm Size 6
954163	RP-F Tibial Insert Trial 17 mm Size 6

## Patella Resection

950501121	Sigma® HP Patella Resection Guide
950501242	Sigma® HP Patella Resection Stylus 32-38 mm
950501243	Sigma® HP Patella Resection Stylus 41 mm

950501247	Sigma® HP Patella Resection Stylus 12 mm Remnant
950501923	HP Patella Wafer Small
950501623	HP Patella Wafer Large
869188	Patella Caliper
865035	Patella Clamp
868800	Oval Patellar Drill-Single End
961100	PFC* Sigma® Oval / Dome Patella Trial 3 Peg 32 mm
961101	PFC* Sigma® Oval / Dome Patella Trial 3 Peg 35 mm
961102	PFC* Sigma® Oval / Dome Patella Trial 3 Peg 38 mm
961103	PFC* Sigma® Oval / Dome Patella Trial 3 Peg 41 mm
966601	Patellar Drill Guide 38 mm & 41 mm
966602	Patellar Drill Guide 32 mm & 35 mm

## Spacer blocks

### Fixed Bearing

950502105	Sigma® HP FBT Spacer Block 8 mm
950502106	Sigma® HP FBT Spacer Block 10 mm
950502107	Sigma® HP FBT Spacer Block 12.5 mm
950502108	Sigma® HP FBT Spacer Block 15 mm
950502109	Sigma® HP FBT Spacer Block 17.5 mm
950502110	Sigma® HP FBT Spacer Block 20 mm
950502111	Sigma® HP FBT Spacer Block 22.5 mm
950502112	Sigma® HP FBT Spacer Block 25 mm
950502113	Sigma® HP FBT Spacer Block 30 mm
950502193	Flexion / Extension CAP Size 6

# Ordering Information

## Mobile Bearing

950502114	HP M.B.T. Spacer Block 10 mm
950502115	HP M.B.T. Spacer Block 12.5 mm
950502116	HP M.B.T. Spacer Block 15 mm
950502117	HP M.B.T. Spacer Block 17.5 mm
950502118	HP M.B.T. Spacer Block 20 mm
950502119	HP M.B.T. Spacer Block 22.5 mm
950502120	HP M.B.T. Spacer Block 25 mm
950502121	HP M.B.T. Spacer Block 30 mm
950502193	Flexion / Extension CAP Size 6

## RP-F

950502122	Sigma® HP Hiflx Size1 Sp Block 10 mm
950502123	Sigma® HP Hiflx Size1 Sp Block 12.5 mm
950502124	Sigma® HP Hiflx Size1 Sp Block 15 mm
950502125	Sigma® HP Hiflx Size1 Sp Block 17.5 mm
950502104	Sigma® RP-F HP Flex Sh IM Size 1
950502100	Sigma® RP-F HP Flex Sh IM Size 1.5
950502101	Sigma® RP-F HP Flex Sh IM Size 2
950502102	Sigma® RP-F HP Flex Sh IM Size 2.5-5
950502103	Sigma® RP-F HP Flex Sh IM Size 6
950502193	Flexion / Extension CAP Size 6

## Pinning

950502070	HP Pin Impactor / Extractor
950502071	HP Power Pin Driver
950502072	HP Quick Pin Drills

950502073	HP Quick Pin Drills Headed
950502088	HP Threaded Pins
950502089	HP Threaded Pins Headed
226712000	Smooth 3 Inch Pins (5 Pack)

## Insertion

### Femur

950501218	Sigma® HP Femoral Notch Impactor
* 950501171	HP Femoral Impactor / Extractor
950501308	HP Slap Hammer
950501305	HP Universal Handle

## Mobile Bearing Tibia

* 950501558	M.B.T. Tibial Impactor
965383	M.B.T. Tray Impactor

## Fixed Bearing Tibia

950501306	Sigma® FB Tibial Impactor
2581-11-000	FBT Tray Inserter
966385	FBT Poly PS

## Instrument Trays

### General

950502800	HP Base Femur & Tibia
950502802	Sigma® HP Spacer blocks
950502808	Sigma® HP Patella & Insertion Instruments
950502840	Sigma® HP Insertion Instruments

\* Manufacturer: Enztec Ltd, 26 Dakota Crescent,  
Sockburn, Christchurch 8004, New Zealand



# Ordering Information

## Femoral Sizing & Resection

950502801	Sigma® HP Fixed Reference Femur Prep
950502803	Sigma® HP RP-F Fixed Reference Femur Prep
950502810	Sigma® HP Classic Reference Femur Prep
950502809	Sigma® HP RP-F Classic Reference Femur Prep
950502811	Sigma® HP Balanced Femur Prep
950502816	Sigma® HP RP-F Balanced Femur Prep
950502820	Sigma® HP Femoral Finishing Blocks

## Fixed Bearing Preparation & Trials

950502812	Sigma® HP FB Tibial Prep
950502837	Sigma® HP Standard Tibial Guides & Punches
950502835	Sigma® HP FB PLI Insert Trials
950502813	Sigma® HP Curved Insert Trials
950502814	Sigma® HP Stabilised Insert Trials

## Mobile Bearing Preparation & Trials

950502806	Sigma® HP M.B.T. Tibia Prep
950502836	Sigma® HP DuoFix™
950502807	Sigma® HP RP Insert Trial

## Femoral Trials

950502804	Sigma® HP Femoral Trials
950502815	Sigma® HP RP-F Trials

## Miscellaneous

950502817	HP CAS
950502841	Sigma® HP Quick Kit FB Case

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