RHK™
Surgical Technique

BIOMET®

Foreword

The Rotating Hinge Knee (RHK™) was developed out of the requirement to reconstruct bony defects around the knee with a durable and mechanically efficient implant. The original indication was for joint reconstruction following resection of bone tumours. However, following experience with custom cases it was apparent that the indications could be expanded to include revision knee surgery, comminuted fractures around the knee, failed internal fixation and for primary knee replacement in those patients with connective tissue disorders. The RHK has been developed over nine years into a highly versatile implant, being available in both custom and modular forms.

One of the main advantages of the RHK, is the experience that Biomet has in the production of other implants within the 'AGC' family of knee replacements, the RHK representing one end of the spectrum of knee arthroplasties available. The main design features that the RHK offers above other similar implants are the efficient quadriceps lever arm, the minimal bone resection required and the large bearing area for the rotating mechanism. The RHK represents a significant step forward in the design of Rotating Hinge Knees. The implants inserted to date have all functioned well and there have been no reported failures up to 5 years. As appropriate to joint replacement, we would like to monitor the RHK's clinical success and would be grateful for your support in submitting the operative form for each case.

Mr Simon Carter
MBBS, FRCS, FRCS(g), RCPS
Royal Orthopaedic Hospital
Birmingham

The RHK™ Knee

History

The RHK™ knee was first implanted as a custom device in 1998, in Liverpool UK, following five years of development work. Subsequently it has been developed in to a production device available on demand off the shelf. Since then a large, and rapidly increasing number of RHK™ knees have been implanted, benefiting patients with the worst cases of knee instability and pain.

Stability, function and simplicity are the key benefits in an increasingly demanding and expectant world. The RHK™ provides these with a wide variety of options, from minimally resurfacing femur and tibia, to segmental tibia or femur, up to total femoral replacement where required.

Indications

The RHK™ knee is a fully constrained hinged knee, suitable for diseased knees with absent cruciate and collateral ligaments. Common clinical symptoms include pain and dysfunction resulting from

- Severe osteolysis
- Trauma
- Oncology
- Multiple Revision Arthroplasty
- Salvage
- Resolved Periprosthetic Infection
- Connective Tissue Disorders

Contra-indications

- Active Infection (remote or locally)
- Osteoporosis
- Obesity

Preoperative Planning

Preoperative planning is an essential step prior to any revision knee arthroplasty. The provision of transparent templates allows estimated sizing of both the femoral and tibial components prior to surgery. Preoperative planning will also determine whether bone graft and/or augmentation blocks need to be used during the procedure.

Component Removal

In the revision situation once the knee has been exposed the next stage will be to carefully remove the previously implanted components.

Patella

If the patella has been resurfaced and is damaged or loose the patellar button will need to be replaced. This is most easily done with a fine oscillating saw to disrupt the prosthesis/cement interface. If the remaining bone stock is adequate the patella can be resurfaced with the Biomet AGC® patellar component. In those cases where the remaining patella is inadequate or too thin, any remaining osteophytes should be removed and the surface of the patella smoothed as much as possible following removal of any cement.

Femoral component

It is usually easier to remove the femoral component first. The bone cement interface should be disrupted using a Gigli saw. This can be used up to the metallic lugs on the femoral component. The remainder of the bone cement interface should be carefully disrupted with fine osteotomes and the component can be successfully destabilised using stacked osteotomes.

Alternatively, the ultrasonic knee osteotome of the Ultra-Drive® cement removal system can be used to disrupt the interface without causing damage to the underlying bone. The prosthesis can then be removed using a manual extractor attached to a slap hammer. After the femoral component has been removed, all particles of cement and membrane should be carefully excised from the bony surface. The bony surface can then be flushed using a pulsed lavage system.

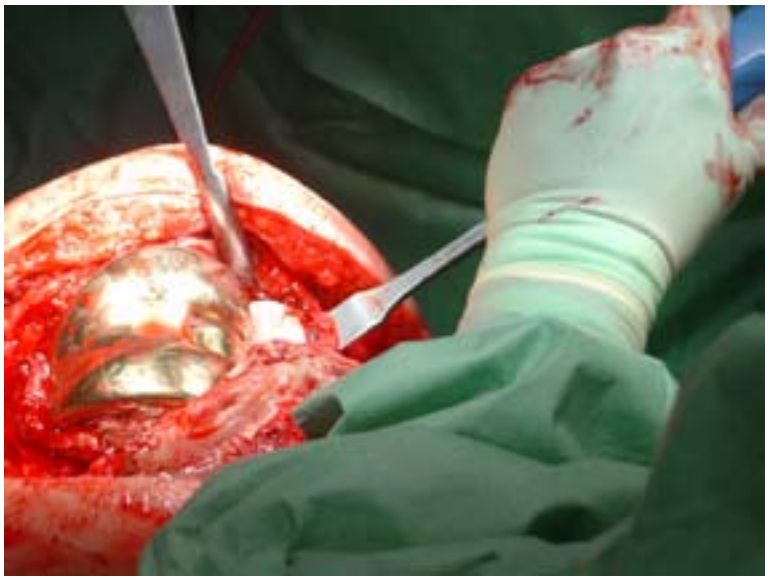
Tibia

Following removal of the femoral component the tibial component can be removed. Firstly, excising all the soft tissue around the proximal tibia should expose the margins of the tibial component. Any obstructing osteophytes or bone can be removed manually. The bone cement interface is then disrupted using either fine osteotomes or the Ultra-Drive® system, and the tibial component removed with the extractor and slap hammer. Any remaining cement is carefully removed from the bone surface of the tibia. The use of a high-speed burr will often aid this process. Once the cement has been removed the bony surface should be flushed with a pulsed lavage system and thoroughly dried.

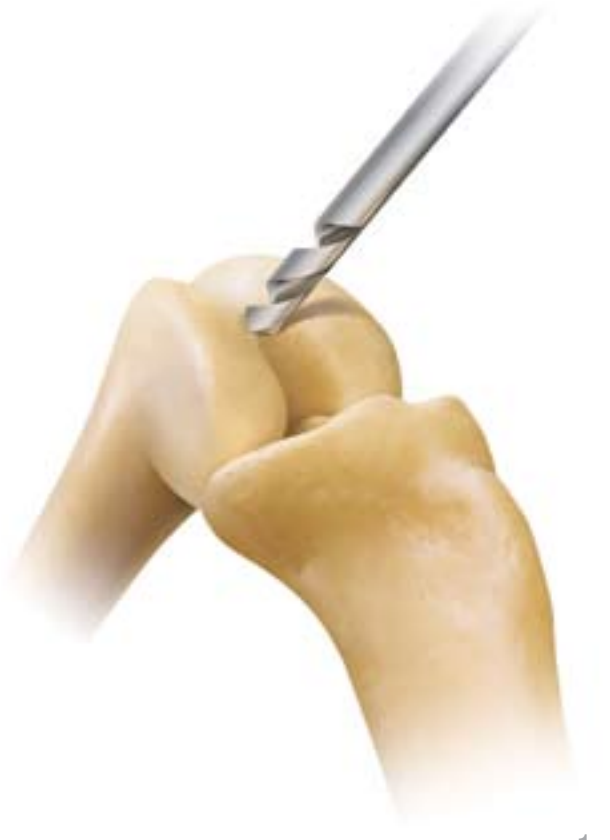
Surgical Technique

Femoral Preparation

Remove pre-existing implants and any remenants of diseased tissue, including osteotphytes and scar tissues, leaving functional ligaments and good quality bone in place.



Intramedullary Femoral Alignment - A 9mm diameter hole is drilled in the centre, medio-laterally of the intercondylar notch and approximately one centimetre above the attachment of the posterior cruciate ligament to the distal femur (figure 1). The hole should be placed through the cortical/cancellous bone by drilling approximately 50 mm into the medullary canal. Note: the drill is used only to penetrate the diaphysis, not to open the proximal canal. Use the femoral sizing templates (figure 2) to select the entry point that best suits the implant for cortical coverage and fit. This is normally posterior to accomodate for bone loss that may have occured behind the patella flange of the primary implant.

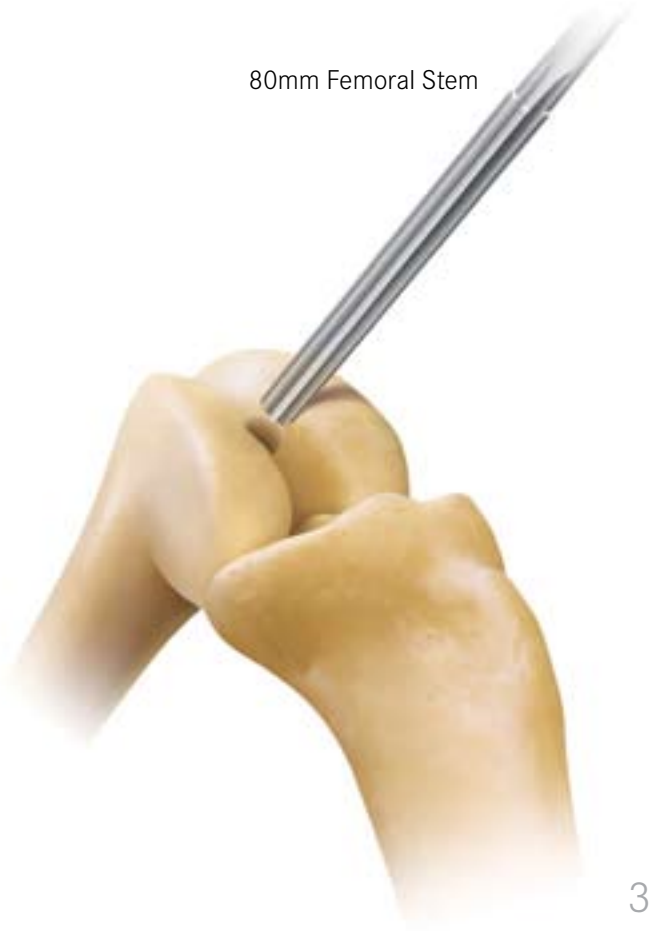


1.

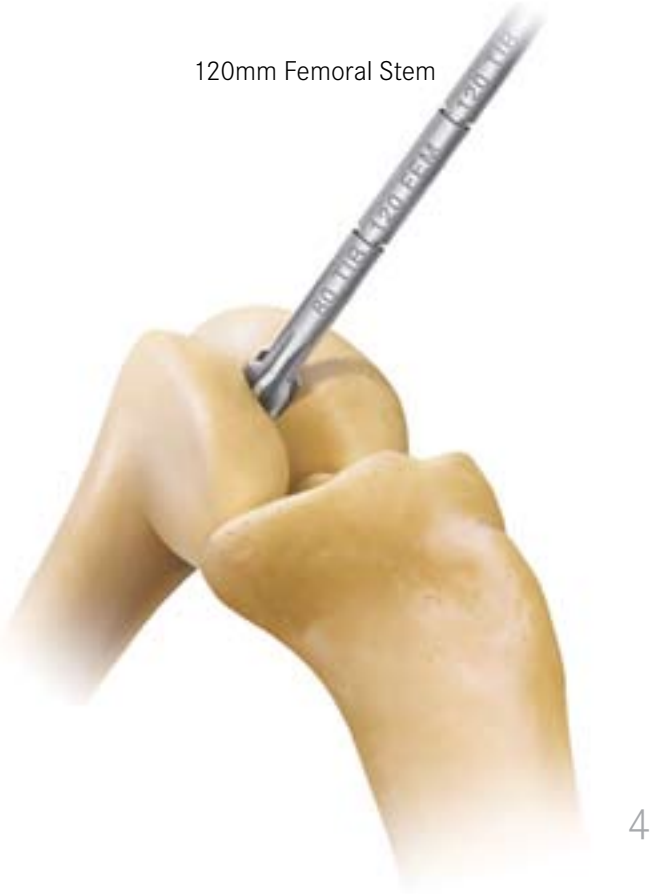
2.

Canal Preparation

Use the T-Handle to progressively ream the femoral canal, starting with the 10mm reamer (figure 3). Fully rotate the reamer to clear the femoral canal. For a short (80mm) femoral stem, ream until the cutting flutes fully enter the intramedullary canal or ream to the first mark on the shaft for the long (120mm) femoral stem. Ensure that the reamer is inserted far enough to allow the required length of the reamer to remain in the bone after the distal femoral cut to accommodate for the length of the stem required. Insert progressively larger reamers (in 2mm steps) until the reamer starts to tube? bone off the intramedullary canal. This is the point at which cortical attrition is felt.



3.



4.

Cementless Stems

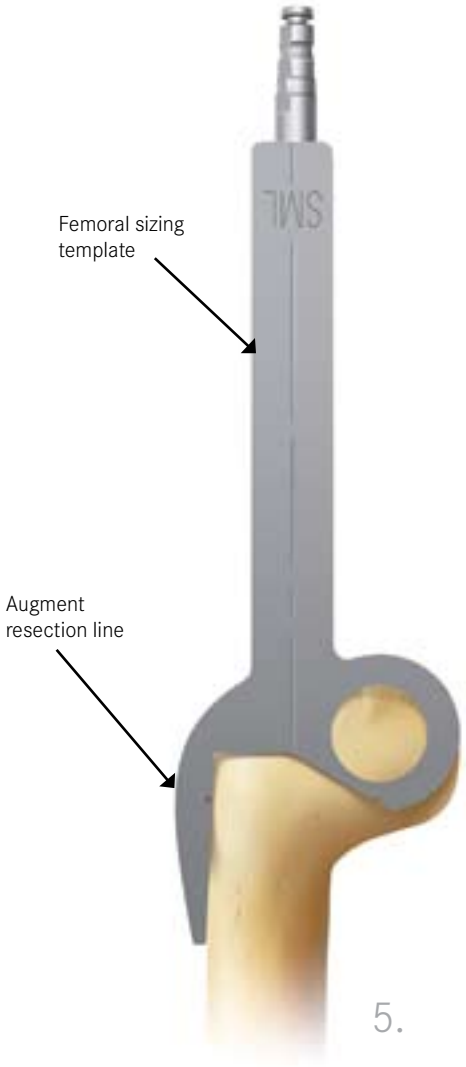
Ream firmly to ensure stable stem fixation. Use an implant stem the same diameter as indicated on the reamer.

Cemented Stems

Ream at least one diameter larger than the stem (eg. 14mm reamer for 12mm stem) to produce a cement mantle of at least 1mm.

Femoral Sizing

Use the femoral sizing templates (Figure 5) to estimate the femoral component size and which augments may be required. Notches on the anterior flange of the template indicate the position of the 10, 20 and 30mm augments. The template can go on either the medial or lateral sides of the femur. Line the handle up with the reamer shaft which will align the femoral component with the intramedullary stem.

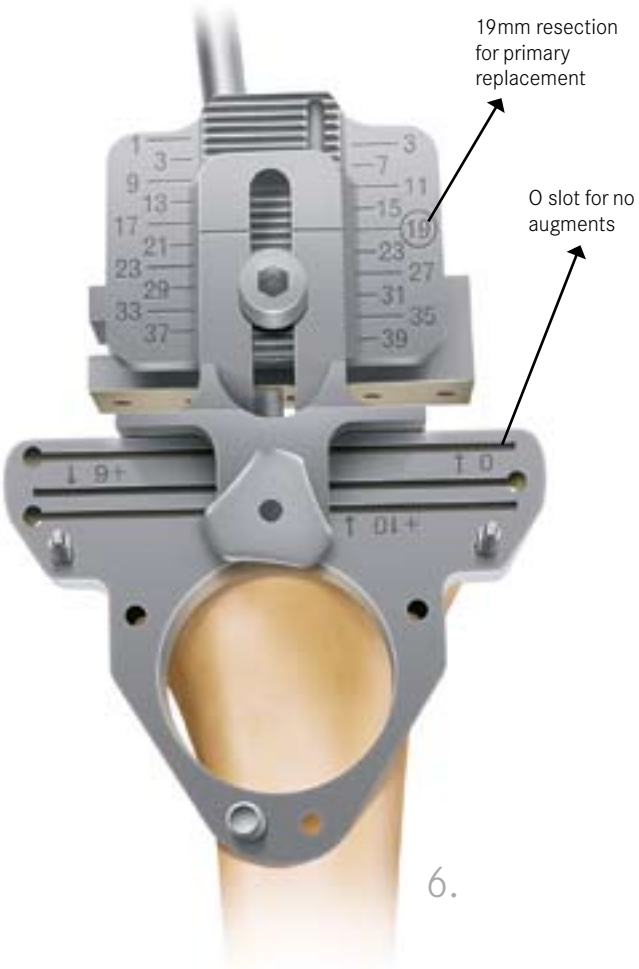


5.

Distal Femoral Resection

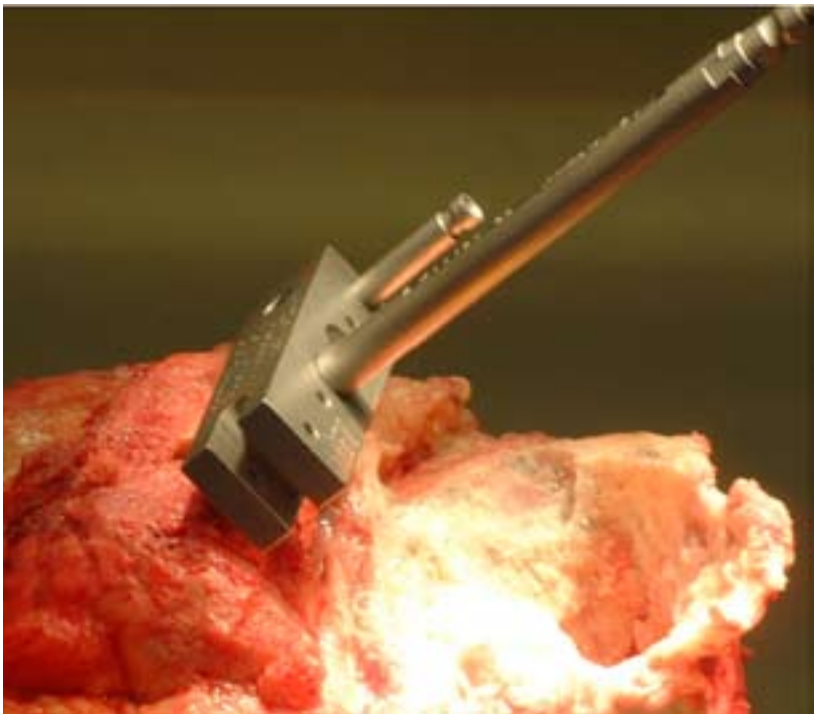
Assemble the Distal cutting guide (Figure 6) to the depth guides. Set the resection scales to place the joint line correctly, or the ringed 19mm mark for a primary joint replacement. If no augments are required, cut through the zero slot.

If augments are required use the +10 slot for a 10mm augment. For 20 and 30mm augments, adjust the depth guide accordingly.



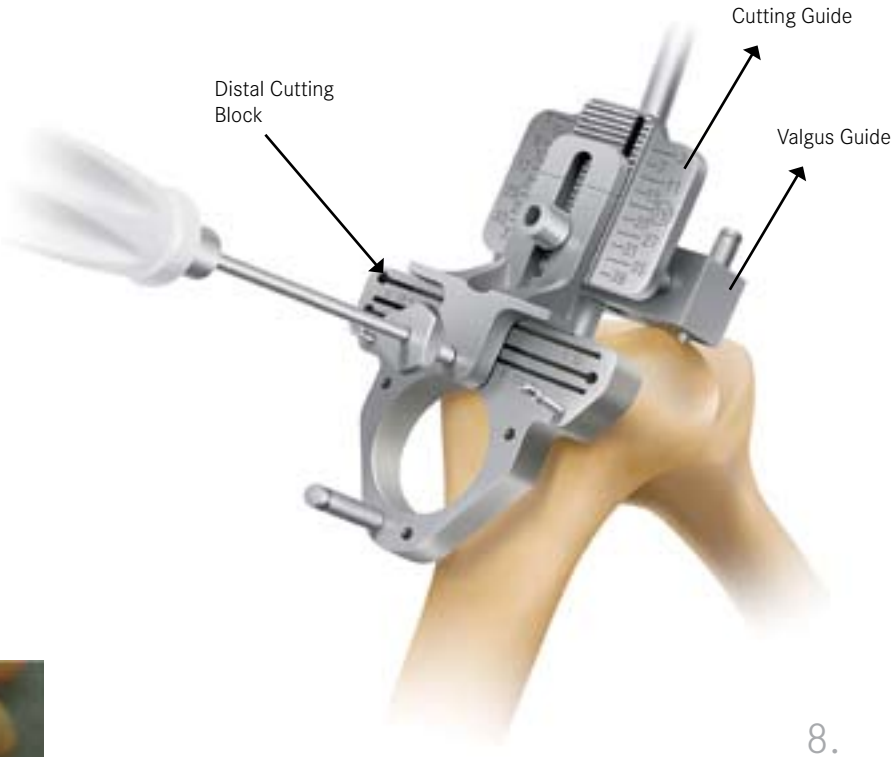
6.

Slide the valgus guide down to the reamer, positioning for the face marked anterior and the reamer passes through the hole marked L or R as appropriate.

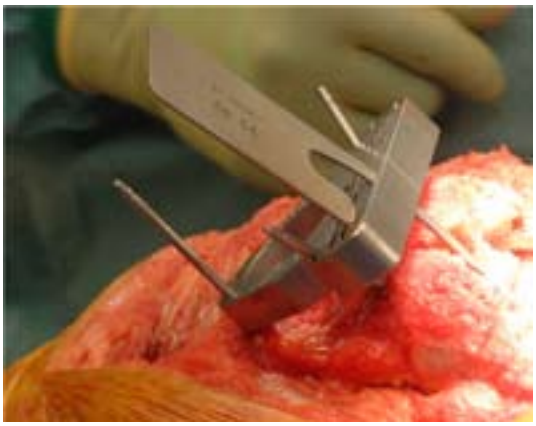


7.

Fix the distal cutting block with three pins. Insert the proximal pin first using the pin hole least likely to impinge the reamer in the femoral canal. Insert pins into any two angled distal holes for stability of the cutting block. Use Angel Wing to check level of resection (Figure 8a).



8.



8a.

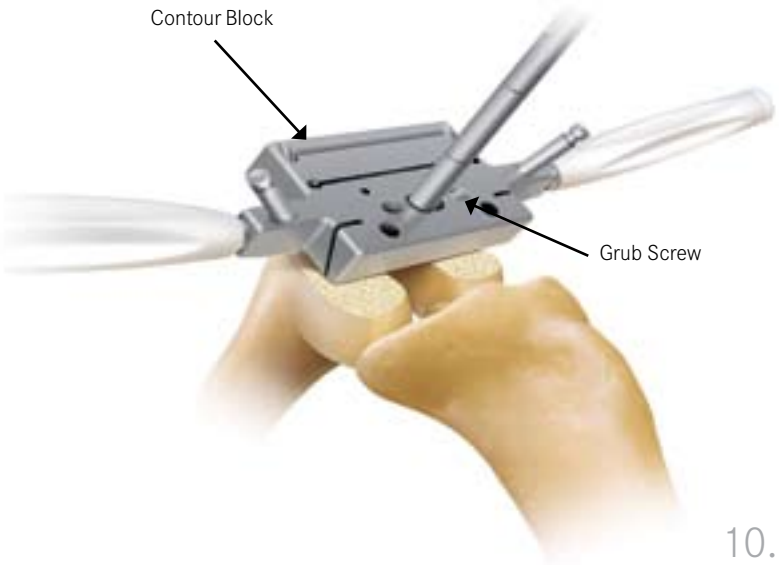
Remove all the components except the cutting guide to perform (figure 9) the distal cut.

9.

Femoral Contour Cuts

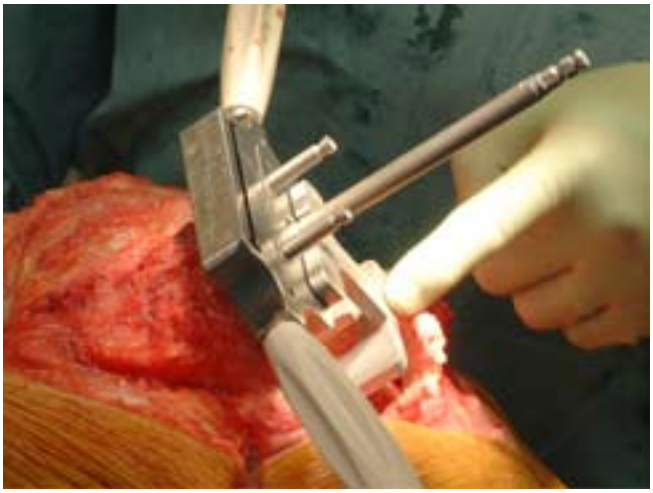
The same contour block (figure 10) is used for either size of femur. Screw in the handles and slide the femoral contour block down the stem reamer through the appropriate hole (L or R), and with the face marked Anterior at the front. Set the required rotation using the transepicondylar axis, Whiteside's line, if they still exist, the posterior condyles, or use the tibial cut to set rotation (Figure 11). Lock the small grub screws onto the reamer and use the various pin holes to stabilise the cutting block.
Make the anterior and posterior cut in that order, before removing all instruments except the reamer. The short posterior slots are designed to remove any bone that might impinge in deep flexion.

The anterior slot is for the posterior condylar resection, whilst the slot immediately in front of the reamer is the patella flange cut. There are no clinical consequence of notches produce in the anterior femur as the long stems used protect the bone.



10.

Augments
If augments cuts have been made, then screw in the appropriate augment spacers (10, 20 or 30mm) into the underside of the block (marked "PEGS").



11.

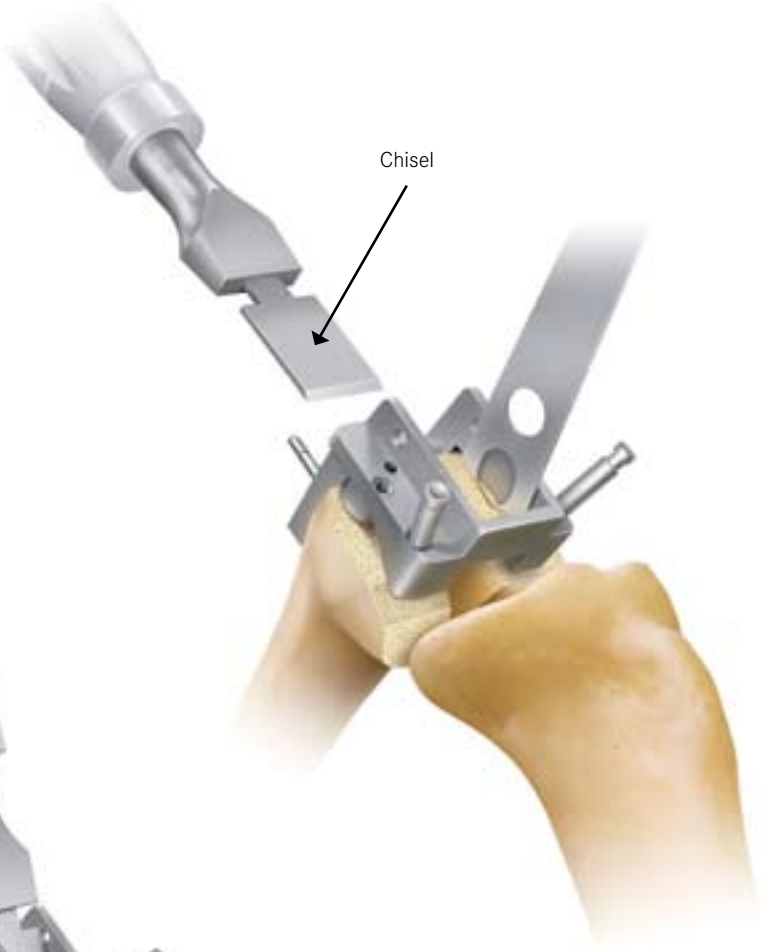
Attaching the Femoral Frame

Assemble the femoral frame with the intramedullary guide bush (figure 12), such that "Left" or "Right" are visible on the front when positioning on the knee. Connect the bush and frame together with a cross pin. Where femoral augments are being used, screw in the trial spacers of 10, 20 or 30mm to the underside of the frame. It is recommended that two headless nails are inserted anteriorly and two long headed nails distally. Once the frame is secure, remove the cross pin, intramedullary guide bush and reamer.

12.

Cutting the box

The femoral box needs to be cut if augments aren't being used on one or both sides (Figure 13). Pass the chisel with the bevelled edge facing distally through the anterior opening of the femoral frame underneath the guide pins. To avoid the risk of fracturing the posterior cortex, only insert about 4-5 mm. Then cut down to the level of the chisel with an oscillating saw and run posteriorly along the same level to obtain the correct depth for the box cut. Impact the chisel all the way to the mechanical stop, where the chisel is released from the guide pins and can be lifted out with the cut intercondylar bone (Figure 14).

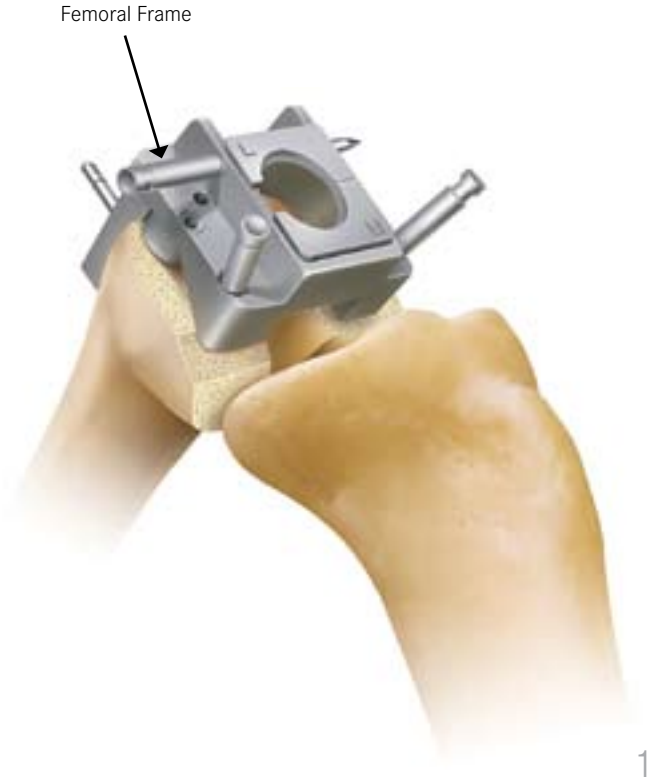


13.

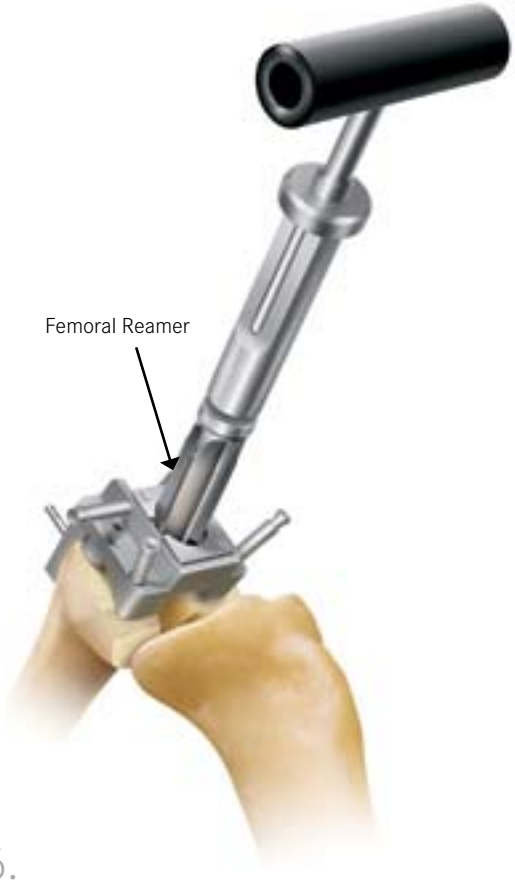
14.

Ream the stem boss

Place the femoral reamer guide into the femoral frame with “L” or “R” upright when in position (Figure 15). Use a long cross pin to fix the guide into the femoral frame. Use the T-Handle and femoral reamer to complete the femoral preparation (Figure 16). Ream until the reamer hits the mechanical stop (Figure 16).



15.



16.

17.

Femoral Trialling

Before attaching trial augments and stems, trial both sizes of femur to select the correct size.

Attach the augment blocks first where required (Figure 18) and then the trial stem. Use the hex driver through the intercondylar notch of the femur to secure the captive nut onto the stem (Figure 19).

Impact the assembled trial femoral component into the prepared femur (Figure 20). Note the anterior marking on the femoral impactor block.

Femoral Sizing
The best time to size the femur is after completing the bone cuts. Both size femurs have the same cuts, so trial both sizes to maximise cortical coverage without overhanging, before attaching stems. An additional benefit of choosing the larger size is that it has a longer patella (extensor) moment arm and therefore improved kinematics and more positive extension locking.

18.

19.

20.

Tibial Preparation

Stem Preparation

Use the pointed 9mm drill to gain access to the tibial intramedullary canal. The entry should be approximately 16mm behind the anterior border of a normal tibia and on the midline of the tibial long axis (Figure 21).

21.

Use the same reamers as for the femur and the T-handle to progressively ream larger until firm cortical bite is achieved. The length of stem is indicated on the reamer and this mark should be below the bone surface after the resection cut is made (Figure 22).

Reaming Notes
As in the femur, use the same size stem as the reamer for uncemented stems, and ream at least one diameter larger (+2mm) for cemented stems.

22.

Intramedullary guide

Assemble the intramedullary tibial guide using either of the two cutting guide blocks1/2 attached to rear of guide body. Slide onto guide horizontal shaft. Slide the assembly down the reamer and lock at the level indicated by the stylus (Figures 23-25).

23.

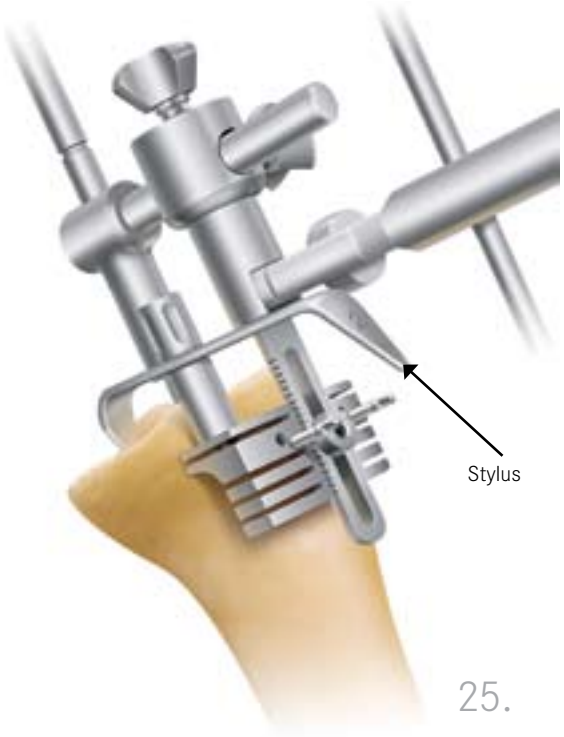
Attach the modular handle6 to the front of the guide body and insert the long intramedullary rod to set the cutting block rotation to align with the shaft of the second metatarsal.
To stabilise the construct, tighten the large top and then the large side screw (Figures 24-25.

Insert two headless pins with the quick release chuck through the lowest holes on the guide block (Figure 25). Remove the stylus and modular handle. More accurate cuts are made with the cutting guide left in place locked to the reamer. In this case, saw around the reamer and finish the cut as necessary after removing the reamer and guide.

24.

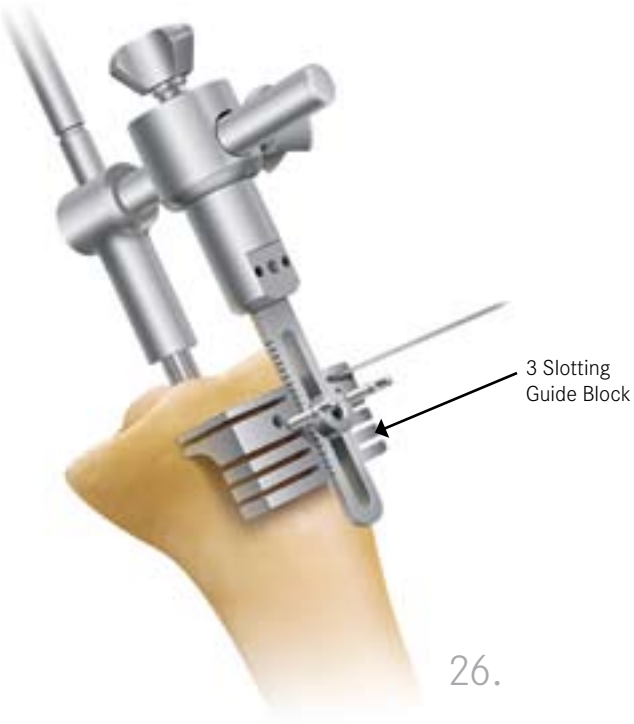
Notes
For primary surgery the use of the 14mm stylus is recommended. Place the stylus over the non-involved lateral condyle and nail pins in place.

Two Stylus (2-10) & (12-14) are available. For revision surgery use the 2mm stylus. Move cutting guide block accordingly if a higher level of tibial resection is required.



25.

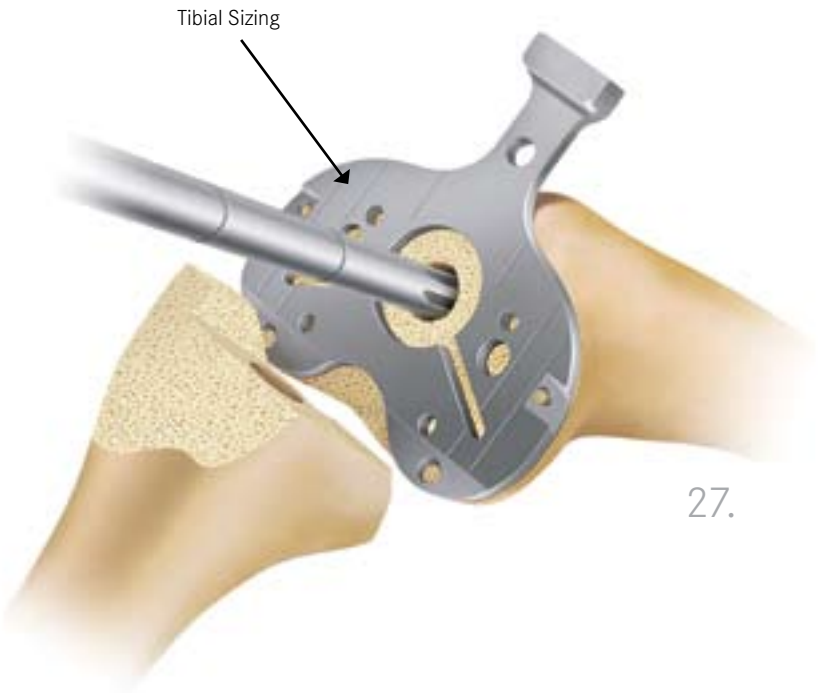
Augments
Cuts can be made using the dedicated 10, 15 (Figure 26) and 20mm slots on the three slotted guide block, corresponding to the three augments available. Alternatively, if the standard cutting block is used each line of nail holes in the standard blocks are 2mm apart, allowing the block to be moved down in 2mm increments as required.



26.

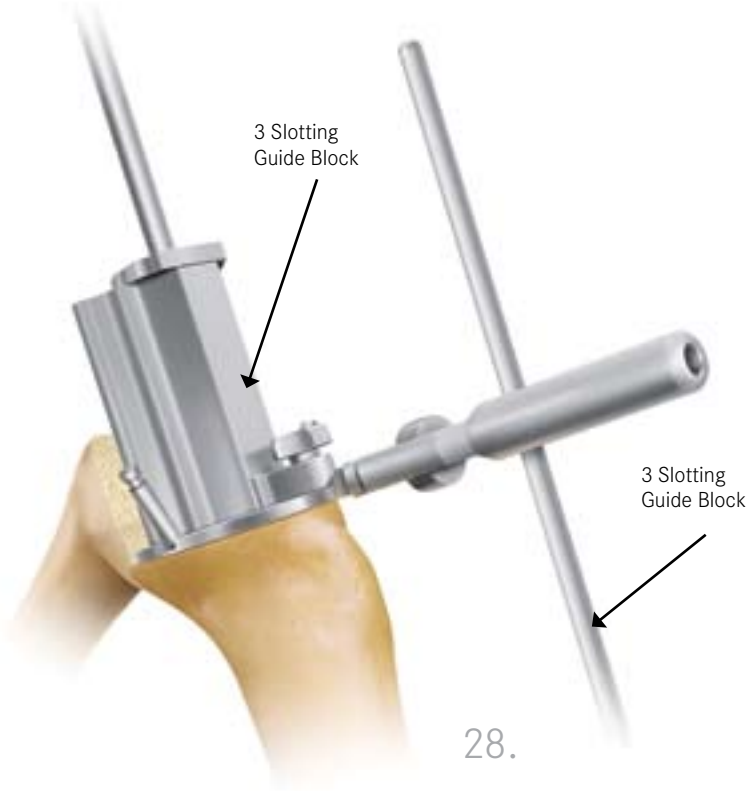
Tibial Sizing and final preparation

Replace the reamer and tap lightly home. Trial tibial templates over the reamer to match both the position of the reamer and the shape of the tibial surface (Figure 27).

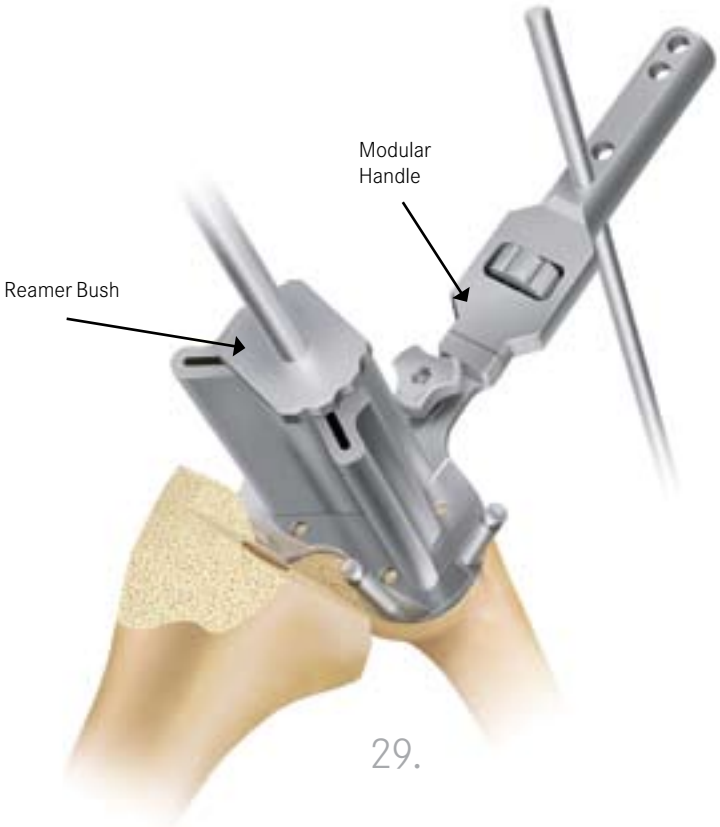


27.

Once the size has been confirmed, attach the tibia tower to the tibial template and insert the reamer bush into the top of the tower. The entire assembly can then be slid down the reamer to sit on the proximal tibia. Confirm external rotation with the extramedullary rod through the modular handle attached to the front of the template. Align with the second metatarsal before nailing the template into place through any of the optional nail holes (Figure 28-29).



28.



29.

Ream and Punch tibial fins

Remove the reamer, reamer bush, handle and alignment rod leaving the template and tower in place. Use either the short tibial reamer for a modular tibia or long reamer for a monoblock tibia (monoblock shown, both are clearly marked on side). Use the T-handle to manually ream until the reamer bottoms out on the mechanical stop (Figure 30).

30.

Remove the reamer and drive the fin punch through the tower until reaching the mechanical stop (Figure 31).

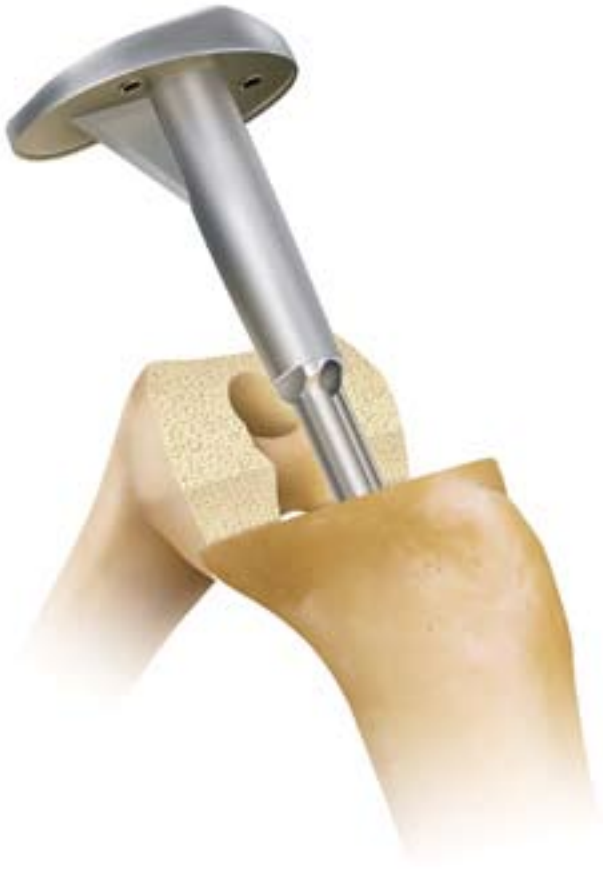
31.

Tibial Trialling

Assemble the chosen tibial component with the appropriate augments and stems as necessary. Use the small Hex (2.5mm) Driver to attach the tibial augments. Then screw the stem trial directly into the tibial component (Figure 32).

Impact the assembled trial into the prepared tibia, paying particular attention to the alignment of the fins to the slots cut in the tibial plateau (Figure 33).

> Note
> If the bone is highly sclerotic, it may useful to trial the tibia without the stem to confirm alignment of these cuts separately to the stem position



32.

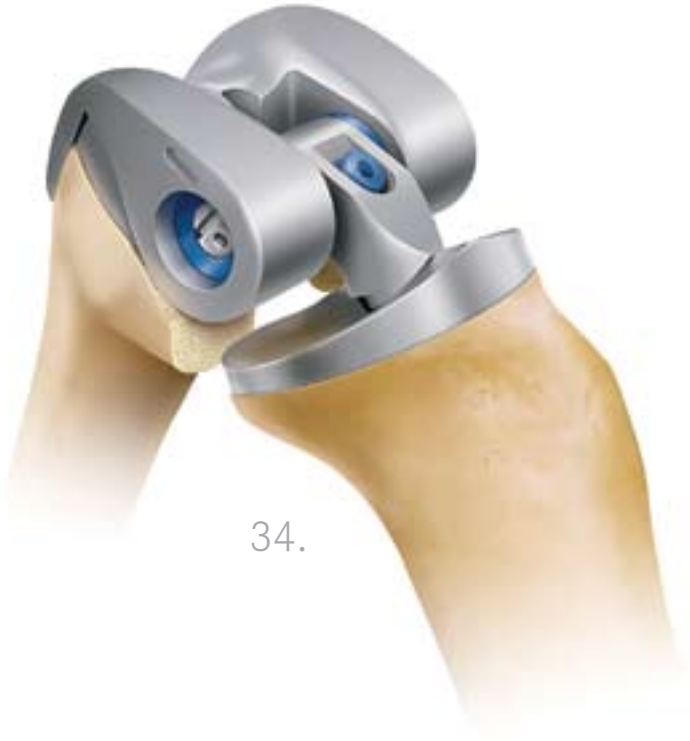
33.

Spacer Trialling

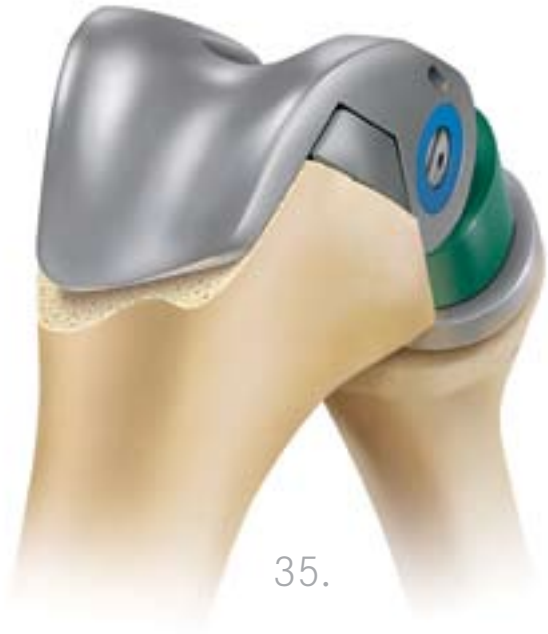
After impacting both the trial tibia and trial femur, insert the trial femoral bushes into the condyles from inside the intercondylar box. It is easiest to use a finger through the hole in the opposite condyle to push the bush across. Then use the first bush to push the second one into place (see assembly instructions for more details).

Drop the post of the trial yoke between the condyles and into the tibia, placing the opening for the axle between the femoral condyles. After lining up the axle opening with the yoke pass the trial axle through the femur from either the medial or lateral side. The trial locking pin may be inserted if desired, by rotating the axle until hole in the front of the yoke is not blocked (Figure 34).

The size of the bearing is determined by the size of the tibial component. The thickness of the bearing is determined by soft tissue tension. The thickness of the bearing should allow the knee to flex and extend freely throughout the range of motion, but should not allow lift off of more than 6mm. Trial bearings (Figure 35) can be inserted in turn from the front, until adequate stability is reached, without disassembling the axle mechanism (Figure 36).



34.



35.

36.

Implant Assembly

The modular augments and stems are fixed to the femoral and tibial components on the side table before implantation (augments first). All taper connections such as stems should be impacted with three sharp hammer blows on a firm surface to ensure a strong and durable connection. Place a swab each on each end to prevent damaging the surfaces.

Femoral Component Assembly

Augments

1. Screw the selected augments to the femur using the standard Biomet 3.5mm driver. Fixation may be augmented if desired by using cement between augments and femur.

Stems

1. For uncemented stems, remove the screw supplied in the stem and discard.
2. Insert the chosen stem, with rotational alignment set by the alignment tab on the femoral stem boss.
3. Place a swab on the top and bottom of the assembled femur and stem, before impacting the stem using three sharp blows with a hammer on a firm surface.
4. Insert the screw packaged with the femur between the condyles and tighten firmly (Figure 37).

37.

Tibial Component Assembly

Augments

1. The augments are screwed onto the tibia using the smaller 2.5mm Allen Key driver for the tibia (Tibial Trials Tray). Fixation may be augmented using cement between the component and augment.

Stems

1. For uncemented stems, remove the screw supplied with the stem and discard. Insert the stem into the tibia. For slotted stems, orientate the slot in the transverse (M-L) plane.
2. Place a swab top and bottom of the assembled tibia and stem, before impacting the stem using three sharp blows with a hammer on a firm surface. This beds the tapers together, ensuring a solid and durable connection. Laslty, tighten the screw packaged with the tibia, with the standard 3.5mm Biomet driver (Figure 38).

Note - For either the femur or tibia use the screw packaged with the tibial or femoral component, and discard the screw that comes packaged in the cementless stems.

If using cemented stems, allow the cement to set before assembling the axle mechanism.

After fixing these components, they are cemented in place before the axle mechanism is assembled in-vivo.

38.

Implantation

Implant the tibia first. It is recommended that the polished articulating surfaces are protected from metal contact, using thick swabs or a trial bearing.

For the femur, align the patella flange with the anterior bone cut or the posterior chamfer cuts with the femur. The tibial tray has alignment marks, which match those marked on the bone from the tibial templates. Line these marks up, and also check the fins on the underside of the tibia fit with the slots prepared in the bone. For a cementless stem, the stem will set alignment as soon as it engages the tibia. If incorrect, pull back and re-insert correctly.

Insert a trial or bearing to pressurise the cement while curing and to confirm the implant bearing thickness.

Hinge Mechanism Assembly in vivo

The axle assembly can be inserted after the femoral and tibial components

1. Insert the single tibial polyethylene bush, thin end first (Figure 39).

39.

2. Insert the two femoral polyethylene bushes one at a time from inside the intercondylar box. It is easiest to push the femoral bushes into place using a finger through the condyle on the opposite side (Figure 40).

40.

3. Then repeat on the other side to insert the second bush. Separate the two bushes to allow the yoke to go between (Figure 41).

41.

4. Assuming the bearing thickness has been decided, place the implant bearing on top of the tibial tray (otherwise use a trial bearing to confirm) (Figure 42).

42.

5. Insert the correct implant yoke (short yoke will work on all bearings, but the long yoke gives increased hop height for 18-20mm bearings and would be recommended) through the bearing and between the femoral condyles into the tibia (Figure 43).

43.

6. Using the axle forceps, rotate the axle until you can see a clear hole through the front of the yoke (Figure 44).

44.

7. This will allow the lock pin to be inserted using the supplied inserter tool. Once the pin is inserted, it is difficult to remove. Check the components are correct before inserting the lock pin (Figure 45).

45.

Removal of lock pin

Should it be necessary to remove the lock pin, it will be damaged in doing so and a new pin will be needed. The easiest way is to use the lock pin impactor/extractor tool, which can be screwed into the lock pin, and the slap hammer attached the other end to remove the pin. Alternatively, use the lock pin drill, from the same tray, to drill the pin out.

Patella

The RHK™ is designed to use a standard Biomet patella, as used for AGC, DA2000, Maxim or Vanguard. Alternatively, the Contruct™ Suture Patella may be used in cases of severe bone loss, patellectomy or patella tendon rupture.

Options

Cement Spacers

A range of cement spacers for both knees and hips for performing two stage revisions are available. Conventional manual cement spacers simply maintain the gap between the femur and the tibia, normally fixed in extension. Biomet Cement Spacer Moulds are two piece cement spacers, similar to metal impants in shape.

The spacer moulds permit joint flexion; thereby reducing the risk of stiffening during the six to eight week normally required to resolve an active periprosthetic infection. The medical grade silicone spacers can be filled by cement gun for the femur, while the tibial spacer can be easily filled by pouring cement to the desired thickness marked on the spacer. Once cured, the antibiotic loaded mould is removed from the silicone and implanted into the joint space.

Catalogue Number	Femoral Mould size	Recommended Cement Mixes per Mould
432 160	60mm	2
432 165	65mm	2
432 170	70mm	2
432 175	75mm	2
Tibial Mould size		
433 165	65mm	2
433 170	70mm	2
433 175	75mm	2
433 180	80mm	2

Copal®

Dual antibiotic bone cement

Copal is a broad spectrum, high viscosity antibacterial cement designed specifically for use in revision arthroplasty and for the treatment of infection. Based on Refobacin-Palocos R, the combination of gentamicin and clindamycin delivered with higher antibiotic concentration and longer lasting release make Copal useful for either single or two stage revisions. The combination of gentamicin and clindamycin are known to have an antibacterial effect on over 90% of the bacteria common in infected arthroplasty (Forster et al, 1988). Copal is fully compatible with Biomet-Merck cement spacer moulds and modern cementing technique, making a very useful clinical option for both single and two stage revision.

Options

ULTRA-DRIVE™

Ultra-DriveTM is designed to rapidly loosen cement and components without risking damage to bone or soft tissues. The high frequency vibration temporarily liquifies the cement whilst any contact with bone is instantly audible, allowing the surgeon to limit damage. Distal cement plugs are quickly and easily removed, normally without the need to resort to cortical windows and reducing the risk of thinning or perforating bone.

The result is reduced operative time incurring decreased blood loss, risk of bone loss tourniquet and anaesthetic time.

32-348058 Revision Staple

Particularly useful for revision procedures in tight knees or damaged patella tendon insertions. The revision staple reinforces the patella tendon, reducing the risk of avulsion.

800-003-00 Manual Revision Instruments

A complete range of manual instruments, specifically designed for implant removal, are available on request. The instruments feature high impact, ergonomically designed handles for minimal hand fatigue and precise application. A set of modular flexible osteotomes can also be included.

Options

The Gravitational Platelet System (GPSTM) is designed to use the body's natural healing processes by taking platelet concentrate systems to a new level of performance and simplicity.

GPSTM uses a small volume of patient blood supplied at the point of care to provide a consistently high quality platelet concentrate. At over 85% platelet recovery and with an automatic separation plug that positively separates the components, the GPSTM is easy to use and outperforms the leading systems on the market. Platelets are quickly separated using a single spin system whilst all the required disposables are supplied in one kit. The healing growth factors carried by the patient's platelets can then be applied with a non-contact spray system.

Construct™

The ConstructTM Suture Patella is designed to give the surgeon a wide range of options to assist reconstruction of patellas with poor stability, low bone stock, or after patellectomy, patella tendon or quadriceps tendon rupture. The anchoring sutures can also be used for positive alignment and improved tracking, or to alter patella baja or alta. If sutures are not required, ConstructTM can be implanted without sutures and cemented like a standard patella.

31mm	11-1500861
34mm	11-150 862
37mm	11-150 863

Implant Listing

Resurfacing Femoral Components

Small Right	154975
Standard Right	154976
Small Left	154978
Standard Left	154979

Tibial Components

63 Modular Tibial Tray	154987
67 Modular Tibial Tray	154988
71 Modular Tibial Tray	154989
75 Modular Tibial Tray	154990
79 Modular Tibial Tray	154991

63 Stemmed Tibial Tray	154993
67 Stemmed Tibial Tray	154994
71 Stemmed Tibial Tray	154995

Connectors

Long Yoke (18, 20 bearings)	154999
Short Yoke (12, 14, 16 bearings)	154997
Axle	154998
Locking Pin	154972
Tibial Bush	154973
Femoral Bush	154974

Bearing

63x12 RHK Tibial Bearing	159430
63x14 RHK Tibial Bearing	159431
63x16 RHK Tibial Bearing	159432
63x18 RHK Tibial Bearing	159433
63x20 RHK Tibial Bearing	159434
71x12 RHK Tibial Bearing	159435
71x14 RHK Tibial Bearing	159436
71x16 RHK Tibial Bearing	159437
71x18 RHK Tibial Bearing	159438
71x20 RHK Tibial Bearing	159439

Uncemented Stems

80 x 10 RHK Uncemented Stem	141 610
80 x 12 RHK Uncemented Stem	141 612
80 x 14 RHK Uncemented Stem	141 614
80 x 16 RHK Uncemented Stem	141 616
80 x 18 RHK Uncemented Stem	141 618
80 x 20 RHK Uncemented Stem	141 620
80 x 22 RHK Uncemented Stem	141 622
80 x 24 RHK Uncemented Stem	141 624
120 x 12 RHK Uncemented Stem	141 652
120 x 14 RHK Uncemented Stem	141 654
120 x 16 RHK Uncemented Stem	141 655
120 x 18 RHK Uncemented Stem	141 656
120 x 20 RHK Uncemented Stem	141 657
120 x 22 RHK Uncemented Stem	141 658

Cemented Stems

RHK 10x80 RHK Cemented Stem	159403
RHK 12x80 RHK Cemented Stem	159405
RHK 14x80 RHK Cemented Stem	159407
RHK 16x80 RHK Cemented Stem	159409
RHK 10x120 RHK Cemented Stem	159414
RHK 12x120 RHK Cemented Stem	159416
RHK 14x120 RHK Cemented Stem	159418
RHK 16x120 RHK Cemented Stem	159420

Implant Listing

Femoral Augments

Sml 10 Fem Augment LL	159447
Sml 10 Fem Augment LM	159448
Sml 10 Fem Augment RL	159449
Sml 10 Fem Augment RM	159450
Sml 20 Fem Augment LL	159451
Sml 20 Fem Augment LM	159452
Sml 20 Fem Augment RM	159453
Sml 20 Fem Augment RL	159454
Sml 30 Fem Augment LL	159455
Sml 30 Fem Augment LM	159456
Sml 30 Fem Augment RL	159457
Sml 30 Fem Augment RM	159458
Std 10 Fem Augment LL	159460
Std 10 Fem Augment LM	159461
Std 10 Fem Augment RL	159462
Std 10 Fem Augment RM	159463
Std 20 Fem Augment LL	159464
Std 20 Fem Augment LM	159465
Std 20 Fem Augment RL	159466
Std 20 Fem Augment RM	159467
Std 30 Fem Augment LL	159468
Std 30 Fem Augment LM	159469
Std 30 Fem Augment RL	159470
Std 30 Fem Augment RM	159471

Segmental Bone Replacement

Modular Segmental components are available from the Customs Department at Biomet UK Ltd to suit the RHK™, both rapidly and cost effectively. The team has many years of combined experience, with a wide range of successful custom solutions from clavicular replacement, to growing prostheses to total femoral replacements. When you need larger bone replacement that only segmental components can deliver, the Customs Department can supply these at short notice, designed and built using all the experience from the many successful implantations since 1998.

Tibial Augments

63x10 Tibial Augment RM/LL	159473
63x10 Tibial Augment RL/LM	159474
63x15 Tibial Augment RM/LL	159475
63x15 Tibial Augment RL/LM	159476
63x20 Tibial Augment	159477
67x10 Tibial Augment RM/LL	159478
67x10 Tibial Augment RL/LM	159479
67x15 Tibial Augment RM/LL	159480
67x15 Tibial Augment RL/LM	159481
67x20 Tibial Augment	159482
71x10 Tibial Augment RM/LL	159483
71x10 Tibial Augment RL/LM	159484
71x15 Tibial Augment RM/LL	159485
71x15 Tibial Augment RL/LM	159486
71x20 Tibial Augment	159487
75x10 Tibial Augment RM/LL	159488
75x10 Tibial Augment RL/LM	159489
75x15 Tibial Augment RM/LL	159490
75x15 Tibial Augment RL/LM	159491
75x20 Tibial Augment	159492
79x10 Tibial Augment RM/LL	159493
79x10 Tibial Augment RL/LM	159494
79x15 Tibial Augment RM/LL	159495
79x15 Tibial Augment RL/LM	159496
79x20 Tibial Augment	159497

Patella

Small (31 mm)	11-150820
Medium (34 mm)	11-150822
Large (37 mm)	1-150824

Instruments

RHK Instrument Set	32-421440

Does not include patella instruments

X-Ray Templates

RHK X-Ray Templates - 110% Magnification
RHK X-Ray Templates - 115% Magnification
RHK X-Ray Templates - 120% Magnification

Notes

Biomet UK Ltd
Waterton Industrial Estate
Bridgend, South Wales
CF31 3XA, United Kingdom

Tel. 01656 655221
Fax: 01656 645454