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BIOMET Europe

Surgical Technique
with **REACT** Instrumentation

AGC
Total Knee System

BIOMET Europe

Preface

The AGC® Knee System is indicated for use in total knee arthroplasty. Accompanying AGC® REACT instrumentation, developed specifically for the system, is required for undertaking an AGC® procedure.

THIS DOCUMENT IS INTENDED AS A GUIDE ONLY FOR THOSE ORTHOPAEDIC SURGEONS PROFICIENT IN THE PROCEDURES FOR PRIMARY TOTAL KNEE ARTHROPLASTY. THE GUIDE DOES NOT TAKE ACCOUNT OF THE INDIVIDUALITY OF PATIENTS AND THE SURGEON PERFORMING THE PROCEDURE IS RESPONSIBLE FOR DECIDING UPON AND IMPLEMENTING THE APPROPRIATE TECHNIQUE OR IMPLANTING THE PROSTHESIS IN EACH PATIENT.

Evolution & innovation

1983 Biomet introduces the **AGC (Anatomically Graduated Components)** Total Knee System with a universal femoral, one piece moulded metal-backed tibial, and dome shaped patellar components.

The first knee system to offer complete component interchangability, ensuring an improved match of implant to the patient's anatomy.

The first femoral component with the durability of a cobalt chrome articulating surface combined with the biocompatibility of titanium porous coating.

1985 Biomet designs an **AGC® Anatomic Femur.** The tibiofemoral articulation is identical to the universal component, however the surgeon now also has the option of using an anatomic femoral component with 7˚ patellofemoral track.

1986 Introduction of Intramedullary instrumentation for the femur enhances surgical flexibility, and accuracy of implantation.

1989 Introduction of the **AGC® Cam & Groove Posterior Stabilised knee[1]**. The only posterior cruciate substituting knee to use exactly the same bone cuts as the cruciate retaining primary knee.

1990 Design and development of the **AGC Modular Tibial II**. The unique compressive loading locking mechanism of the bearing to the plate proves to be a major advance in reducing micromotion and wear within modular systems.

1993 **ArCom® (Argon packaged Compression Moduled Polythylene)**
AGC one piece tibial bearings have always been manufactured by direct compression moulding, **a process known to improve the wear characteristics of the polyethylene**[2,4,5]. However in 1993 Biomet began gamma sterilisation of all bearings in inert argon gas, a procedure which reduces oxidation and in doing so **further enhances the wear properties of the polyethylene**[5].

1996 **The AGC® High Post Posterior Stabilised knee** with ArCom® polyethylene bearings completes the primary AGC® family.

2001 **AGC® React Instrumentation Programme.**
Retaining all user friendly 'tried & tested' design features while incorporating new innovations gained through technological advances and long term experience in orthopaedic surgery.

Product Description

Introduced in 1983, the AGC® (Anatomically Graduated Components) Total Knee is a proven clinical success unsurpassed by any other knee system available today. Ritter et al[1] reported a 98% survivorship for the AGC® Knee at 15 years. Independent data from the Swedish Knee Study reported a cumulative survival rate of 97.5% at 7 years for 3,258 AGC® total knee arthroplasties[2]. Results from the Finnish Arthroplasty Study further supports these excellent results[3].

AGC® Posterior Cruciate Retaining Femoral Component with ArCom® polyethylene Patella.

AGC® Posterior Cruciate Substituting (Cam & Groove) Femoral Component with moulded Tibia.

The AGC® Knee offers the following features:

- ArCom® compression moulded polyethylene provides a highly consolidated bearing material with an increased resistance to wear[4][5].
- Full interchangeability of femoral, tibial and patellar components allows independent sizing, meeting the specific anatomical demands of the individual patient[6].
- Cruciate-retaining and cruciate substituting implant options enable the surgeon to select intraoperatively the most appropriate AGC® component for the patient[7].
- Cobalt chromium femoral articular surface for maximum durability of the tibiofemoral and patellofemoral articulation, reduces the potential for wear and loosening of the implant.

- Titanium alloy plasma sprayed porous coating for cementless fixation, or Interlok™ finish for cemented use, offer proven clinical biocompatibility[8], and have been in use with the AGC® system since 1983.
- A deep, wide trochlear groove articulates with the dome shaped patellar component, creating a congruent and forgiving patellofemoral joint.
- Wide femoral condyles provide line contact with the articulating surfaces, reducing the contact stresses.

AGC® Posterior Cruciate Substituting (High Post) Femoral & Tibial Components.

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3. *Paavolainen P. ; Slätis F. ; Hämäläinen M. ; Visuri T ; Pulkkinen P. 'Long Term Results of Total Joint Arthroplasty. Results of a 15-year follow-up on a nationwide registration programme in Finland with 67,714 TJA' 1995.*
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General Principles

In total knee replacement surgery, the goals centre on achieving correct mechanical alignment by balancing the knee and ensuring adequate soft tissue tension. Intramedullary instrumentation will minimise the problems encountered with mal-alignment and provide the means for accurate bone resections, however care is necessary to achieve correct tension in the soft tissues.

Failure to achieve neutral limb alignment is one of the most common errors in total knee arthroplasty and is implicated in premature failure of implants. The aim is to correct the tibial femoral angle to between 5 degrees and 8 degrees of valgus. Pre-operative templating will aid the surgeon giving indication of the correct prosthetic size required to provide adequate coverage of both the medial and lateral femoral condyles. Pre-operative templating will also suggest the probable size and thickness of the tibial components.

Adequate exposure of the joint is essential and the pre-operative deformity must be fully corrected by selective ligamentous release to fully balance the knee.

Surgical Approach

Adequate view during knee replacement surgery is the key to all forms of knee replacement and emphasis is placed upon accurate alignment of the prosthesis, so in general intramedullary instrumentation is now recommended for the femur.

Skin marks provide useful guides to closure and in general skin closure in flexion is recommended to maximise postoperative range of motion [fig 1].

A standard mid-line incision is routine and the knee joint approached using a medial parapatellar incision [fig 2]. A lateral parapatellar approach is rarely indicated but can occasionally be used in the severe valgus knee. The existence of any previous scars should be noted and should be included in the incision where possible. Use of the most lateral pre-existing scar is advised to minimise the risk of post-operative wound necrosis.

In the majority of primary knees the medial parapatellar incision will allow simple eversion of the patella without added release. In the tight knee, the knee with patella baja, and the revision knee additional soft tissue release may be necessary. In the obese knee a lateral release from superficial to deep should be undertaken for frequently the patella can then be everted into the lateral pouch created by this release.

When a simple medial parapatellar incision does not allow eversion of the patella then either a proximal soft tissue release can be contemplated or tibial tubercle osteotomy can be tried. Increasing reliance is placed on the soft tissue release and turn down rather than osteotomy. Osteotomy (Whiteside procedure) is particularly helpful in patients with pre-existing patella baja.

Initially, a rectus snip is performed and frequently suffices. A more formal quadriceps turndown may be necessary in the very tight knees or in the revision situation.

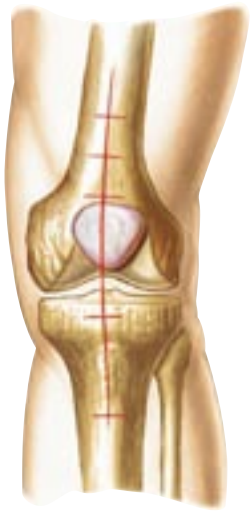


Fig 1

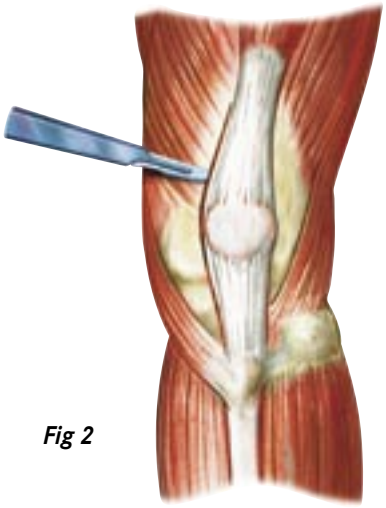


Fig 2

Principles of Ligamentous Balance

Soft tissue balance in total knee replacement surgery cannot be over stressed and failure to achieve adequate soft tissue balancing will result in premature wear of the implant and early loosening. Ligamentous balancing is carried out in 3 phases.

1. Good exposure of the distal femur and proximal tibia is key to accurate placement of the implant and a preliminary soft tissue release with osteophyte excision is essential.
2. Surface replacement of both the distal femur and proximal tibia is then undertaken using intramedullary femoral and intramedullary or extramedullary tibial alignment referencing the bone cuts from the normal anatomy.
3. A selective soft tissue release is then performed using either trial implants or spacer blocks to correct the overall alignment. Fine tuning of soft tissue release is achieved at trial reduction.

Correction of Varus Deformity

The medial tissues are generally released from the proximal tibia during the course of the surgical approach. Releases of the capsule and deep collateral ligament with resection of the osteophytes and medial meniscus are routinely undertaken.

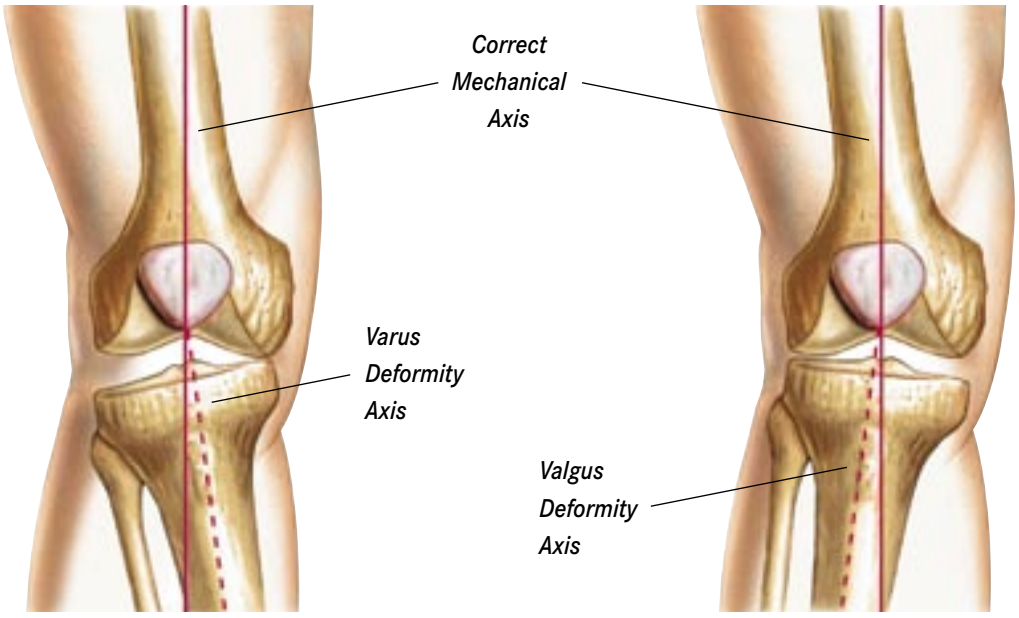
If present the anterior cruciate ligament is excised and the posterior medial corner of the capsule is released from the proximal tibia. The following structures are elevated as an intact periosteal sleeve from the medial tibia.

1. Medial osteophytes are removed from both the distal femur and proximal tibia.
2. A complete capsular release is achieved from the periphery of the tibial plateau. Release of both the superficial collateral ligament and the posterior portion of the deep medial collateral ligament is achieved.
3. Posterior osteophyte excision is necessary both from the proximal tibia but more commonly from the distal femur.
4. In more severe deformities the posterior cruciate ligament may need to be recessed or released. In very severe cases, the posterior capsule is released or divided and the medial gastrocnemius muscles released from the proximal tibia.

Correction of the Valgus Deformity

In general, the severe valgus knee is approached using a medial parapatella incision. A lateral approach (Keblish) can be considered as it makes the initial soft tissue release very straight forward, however adequate exposure of the medial side of the joint can be difficult. A lateral retinacular release and an adequate recession/release of the PCL are nearly always required when dealing with such a deformity. The sequence of correction of the valgus deformity normally occurs in the following manner:

1. A minimal release of the medial structures is performed to adequately expose the joint but care is taken to avoid medial laxity.
2. A complete exposure of the lateral aspect of both proximal tibia and distal femur is required. All meniscal remnants are removed and osteophytes excised.
3. Intramedullary femoral instrumentation is used to resurface the distal femur and intra or extramedullary tibial instrumentation utilised to resurface the proximal tibia with the chosen prosthesis thickness.
4. A selective soft tissue release is undertaken to balance the knee.
5. Release of the popliteus and the postero-lateral capsule is often needed and will release both flexion and extension valgus contractures.
6. Release of the iliotibial band and the lateral capsular attachments to the tibia will correct deformity in extension and is usually required.
7. For the more severe deformity the posterior cruciate ligament and the lateral collateral ligament may need releasing and all posterior osteophytes must be removed.
8. On very rare occasions the biceps tendon may need to be released. This should be performed from outside to in after adequate exposure of the lateral peroneal nerve. This is a hazardous procedure and is often associated with a post-operative dropfoot as a result of damage and stretching of the lateral popliteal nerve.



Varus deformity

Valgus deformity

Posterior Cruciate Ligament Release

Consideration of posterior cruciate ligament balancing, sacrificing or substitution is fundamental in total knee replacement. The posterior cruciate ligament cannot function normally after excision of the ACL. Overtensioning the 'PCL' in total knee replacement surgery can lead to failure due to polyethylene wear, loosening and inadequate function.

It is thought that a retained posterior cruciate ligament will contribute to AP stability and may preserve proprioception.

Excessive PCL tightness can be identified at trial by limited flexion, excessive femoral roll back, anterior lift off of the tibial tray in flexion and palpable ligamentous tension in flexion. The most common causes of residual tightness in the PCL include posterior osteophytes, incomplete resection of the menisci, a pre-operative fixed flexion deformity and a raised jointline.

The cruciate ligament can be lengthened by recession from the tibial attachment with either diathemy or a knife. A partial release can be done once the components are in situ. The sequential lengthening of the tibial attachment can be performed by release of a small portion of bony attachment of the PCL. Further release can be gained by a posterior capsular release.

SURGICAL TECHNIQUE

AGC® Posterior Cruciate Retaining or Substituting (Cam and groove)

Step - 1

- Trim peripheral osteophytes to restore the knee to its normal anatomical shape [fig 3].
- After full exposure and soft tissue release either femur or tibia may be resected first. However, for a tight knee it may be easier to start with the tibia providing extra space to approach the femur.

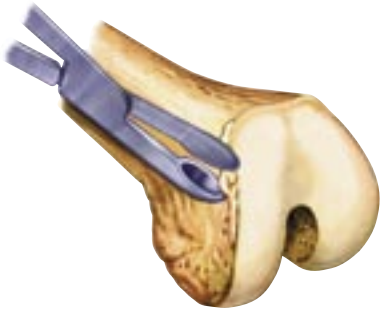


Fig 3

Femoral Intramedullary Technique

Note; If the patient has a long stem hip replacement then extramedullary femoral alignment should be used.

Step 2 - *Preparing the Intramedullary Canal*

- Prior to drilling the intercondylar notch area, refer to the x-rays A/P and L to verify the exact hole location and femoral canal. Use the reamer drill, make a hole in the centre of the intercondylar notch approximately 1cm anterior to the emergence of the posterior cruciate ligament. The drill has a sharp tip to prevent skidding off the bone. Drill beyond the step of the drill in order to make the entry hole larger than the IM rod. This is important to ensure that alignment is referenced from the intramedullary canal and not the entry hole [fig 4].

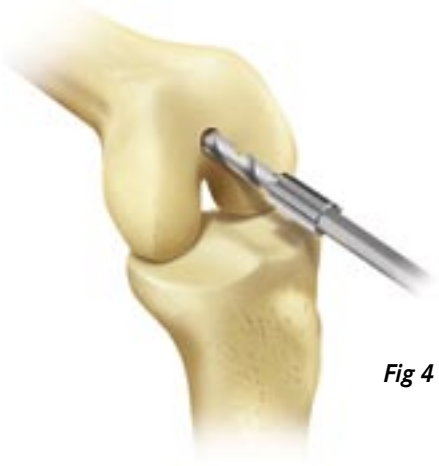
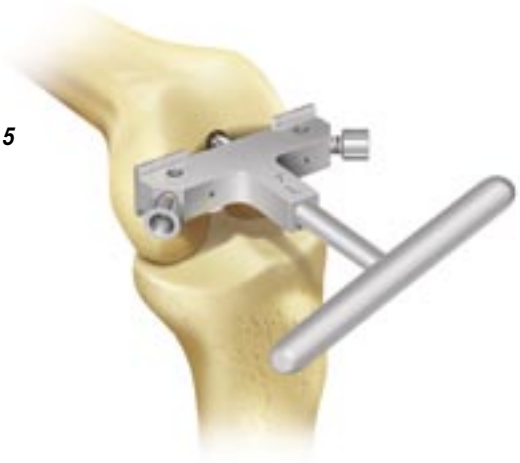


Fig 4

Fig 5



Step 3 - *Setting the Valgus Angle*

- A long leg radiograph can be templated to find the valgus angle between the mechanical and anatomical axes.
- Choose the appropriate fixed angle Valgus block and place the intramedullary rod (IM rod) through it. Ensure that the valgus block is the correct way up. (L on top for a left knee and R on top for a right knee) [fig 5].
- Insert the fluted IM rod and valgus block assembly into the femoral canal to abut the femoral distal condyles. Frequently only the least eroded condyle touches the guide.
- Rotate the valgus block so that approximately equal amounts of posterior condyles are visible under the guide, or so that the anterior surface is horizontal.
- Fix the valgus block in position by inserting quick release drills or bone nails into the holes in the front of the block.

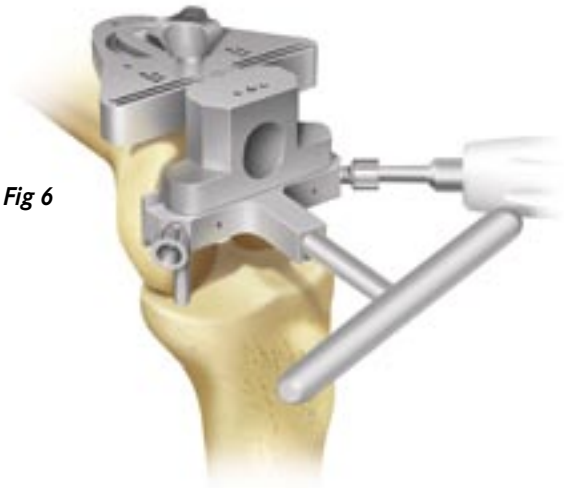


Fig 6

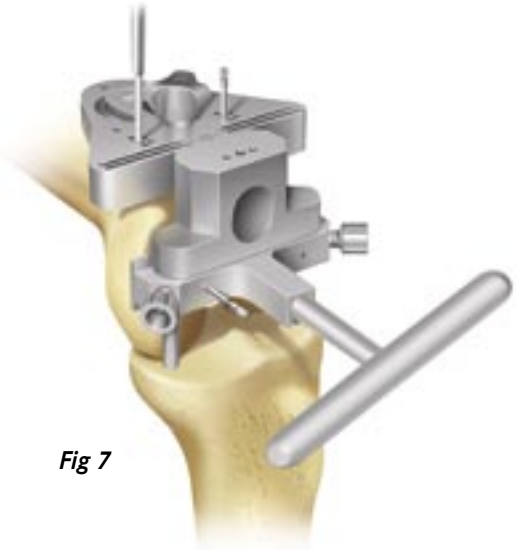


Fig 7

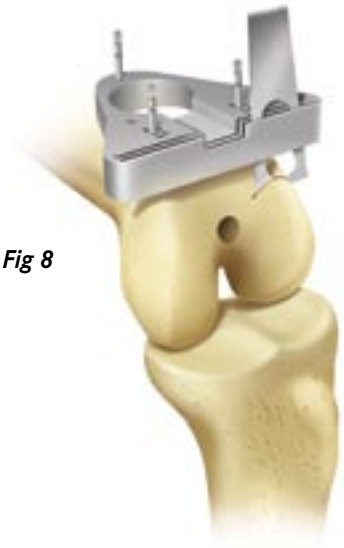


Fig 8

Step 4 – *Distal Femoral Resection*

- Attach the distal cutting block to the distal cutting jig by means of the captured thumbscrew in the distal cutting jig. The distal cutting block should be aligned with the '0' mark on the distal cutting jig which coincides with the lower saw blade slot.
- Place the distal cutting block and Jig assembly into the valgus block; the two poles of the distal cutting jig dropping into the two holes in the valgus block. The arrangement is then secured by means of the captured screws on the sides of the valgus block [fig 6].
- Using three bone nails or quick release drills, secure the distal cutting block to the anterior femur,starting with the proximal pin followed by the distal pins [fig 7].
- An extramedullary check can be made by attaching the universal handle onto the upper part of the distal cutting jig and passing an extramedullary rod through it.
- Fully undo the thumbscrew that attaches the cutting block to the distal cutting jig and drop the distal cutting block onto the anterior cortex.
- The I/M rod, valgus block and distal cutting jig are removed leaving the distal cutting block in place [fig 8].
- Resect the bone from the distal end of the femur through the cutting slot marked 'O'. This removes 9mm of bone, which is of equal thickness to the distal condyles of the implant. (The femur cutting slot removes an additional 3mm of bone and would typically be used with a pre-operative fixed flexion contracture.)
- The glass block is a useful aid to check for 'high spots' on the surface. Remove any roughened areas with the rasp [fig 9].

Note: If the bone is of poor quality the instrumentation can be retained in place on the bone for added stability. The quick release drills (or nails) may be removed just before completing the resection.

Note: A 1.35mm thick sawblade is recommended. Thin blades have a tendency to flex on hard bone, thus failing to achieve an accurate cut.

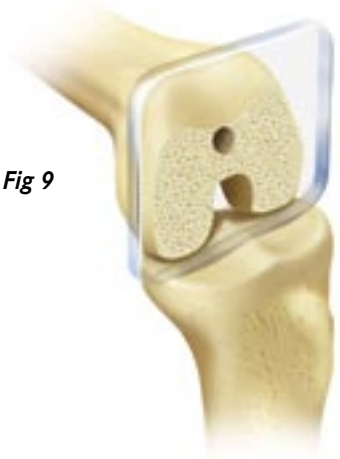


Fig 9

Step 5 – *Femoral Component Sizing*

- Place the femoral sizer assembled with 3deg.L (for a left knee) or 3 deg.R (for a right knee) onto the resected femur. (0 deg. feet are also provided in case external rotation is not desired.) Its adjacent face should be in full contact with the bone and its feet should sit touching the posterior condyles.
- The thumbscrew must be fully screwed down [fig 10].
- The anterior outrigger arm is free to pivot either medially or laterally. Place this on the anterior cortex. Do not allow it to rest within the femoral fossa as this may indicate a femoral component that is undersized. If it does move the outrigger slightly lateral.
- The guide can be placed centrally or slightly lateral.
- Option 1: Read the size of the femoral component required (55, 60, 65, 70, 75, or 80mm) using the calibrated scale. If the reading falls between two sizes select the larger option. This will prevent notching the femur and leave enough bone for further resection if it is required. The medial lateral sizing can be checked using the scale on the sides of the sizer to optimise M-L placement of the femoral component [fig 11].
- Option 2: Read the size of the femoral component required (55, 60, 65, 70, 75, or 80mm) using the calibrated scale. If the reading falls between two sizes select the smaller size and unscrew the thumbscrew until the sizing mark on the post is inline with the size chosen on the calibrated scale. This aligns the anterior cut to the anterior cortex and will resect additional posterior bone. The medial lateral sizing can be checked using the scale on the sides of the sizer [fig 12].
- Using a 6mm-diameter stop drill under power, drill through one of the holes in the positioner down to the stop. Leave the drill in the hole while the second hole is drilled. These holes accept the femoral contour block and the anti-rotation pegs of the femoral component [fig 13].

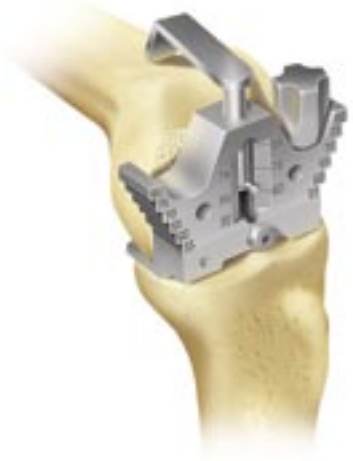
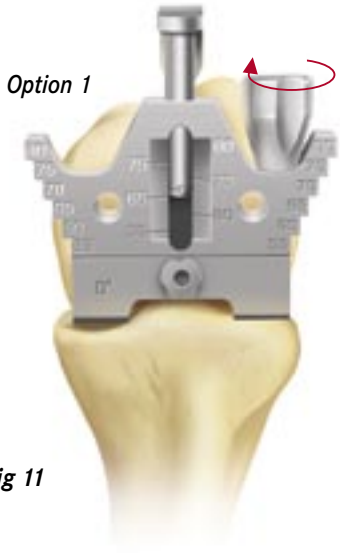
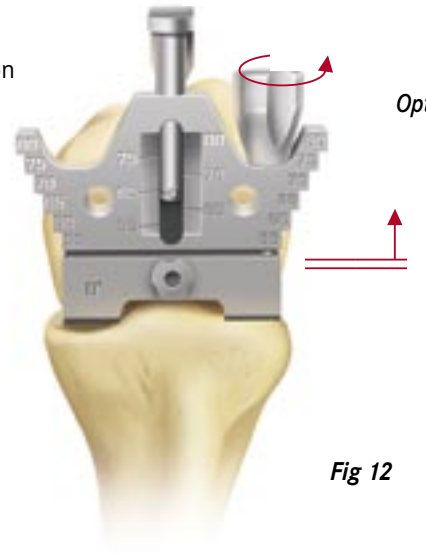


Fig 10



Option 1

Fig 11



Option 2

Fig 12

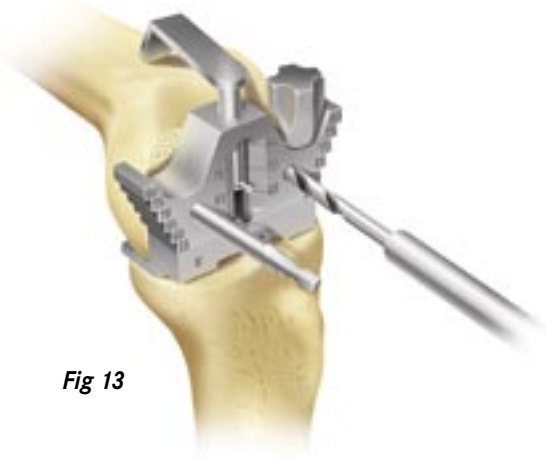


Fig 13

Step 6 – *Anterior, Posterior and Chamfer Femoral Cuts.*

- Screw the handles onto either side of the contour block [fig 14].
- Fit the appropriately sized anatomic femoral contour block onto the distal femur. The labelling 'POSTERIOR' and 'ANTERIOR' indicate its orientation. The anterior resection produces a chamfer angled at 3° to avoid notching the femur.
- Perform the cuts in the following order; anterior, posterior, posterior chamfer and finally anterior chamfer.

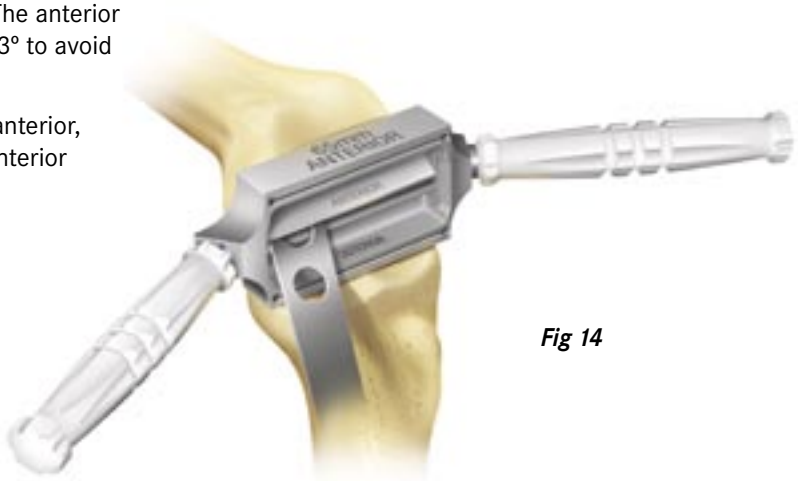


Fig 14

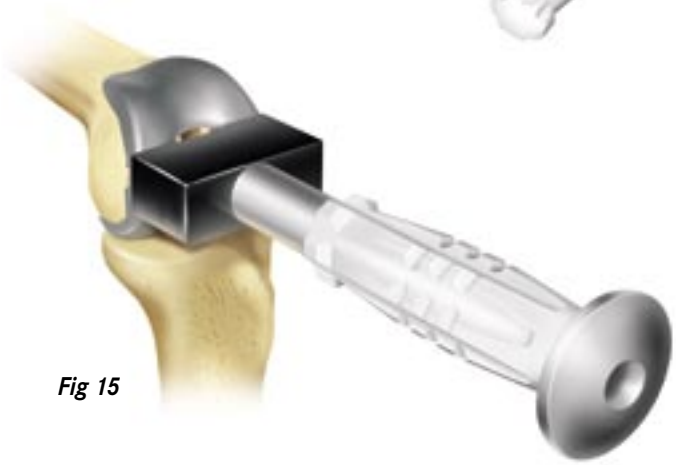


Fig 15

Step 7 – *Femoral Trialing*

- Using the femoral inserter/extractor place the appropriately sized trial AGC® femoral component onto the resected bone. Carefully align the component so that its anti-rotation pegs will fit into the drilled holes. Impact until nearly seated, release the femoral inserter/extractor and finish impacting with the femoral impactor [fig 15].
- To remove the trial, use the femoral inserter/extractor in combination with the slap hammer [fig 15a]. The pincer tips of the inserter/extractor fit securely into the recesses on the posterior surface of the femoral trial.

Fig 15a

Step 8 – *Tibial Resection*

A) Tibial Extramedullary Technique

A choice of two extramedullary tibial shafts are available. One identified as 0° will provide a neutral or perpendicular resection in both the coronal and sagittal planes, whilst the other, marked 5° will provide a 5° posterior slope when viewed in the sagittal plane.

- Attach a tibial cutting block (These are sided left and right) to the top of the tibial resector. There is a recess at the top of the guide to locate the screw.
- With the leg in 90° of flexion place the telescopic tibial resector onto the anterior tibia with its spring around the ankle. The ankle clamp attachment is biased left or right and is marked to indicate this [fig 16].
- In the lateral view align the shaft of the resector parallel to the mechanical axis of the tibia by releasing the distal locking screw and adjusting the shaft until it is parallel to the anterior portion of the tibial crest. Tighten the distal locking screw [fig 17].
- In the frontal view the shaft should be in line with the medial third of the tibial tubercle with the ankle clamp sitting centrally on the ankle.

Fig 16

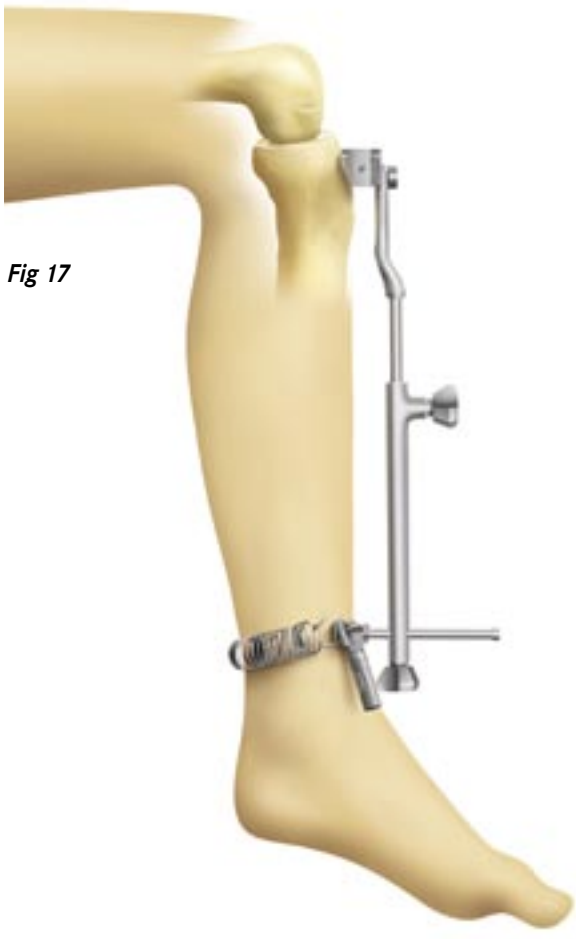


Fig 17

- The level of the resection can be judged either with the referencing finger placed through the slot of the cutting head or with the stylus, which is screwed into the cutting head [fig 18]. The stylus measures either a minimal 2mm cut under the defect or a 10mm cut typically from an intact lateral plateau. The stylus is clearly marked 2mm on one end and 10mm on the other.
- Set the level of resection by loosening the anterior screw then raising or dropping the upper part of the telescopic shaft. Tighten the anterior screw.
- Secure the cutting block to the bone with either two bone nails or quick release drills using the lowest set of holes. In poor quality bone the cutting block can be cross-pinned to improve fixation.
- The resection is made through the slot in the tibial cutting block [fig 19].
- Under the slot additional pin holes have been provided. Headless pins can be inserted into these holes and act as a guide to accuracy of saw cuts.
- If additional bone resection is required, replace the tibial cutting block over the quick release drills using a higher set of holes. There is a 2mm gap between each set of holes.

Note: A 1.35mm thick sawblade is recommended.

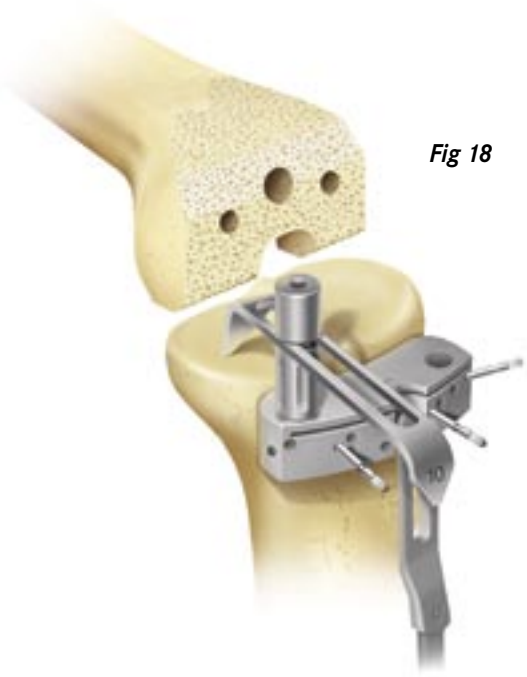


Fig 18

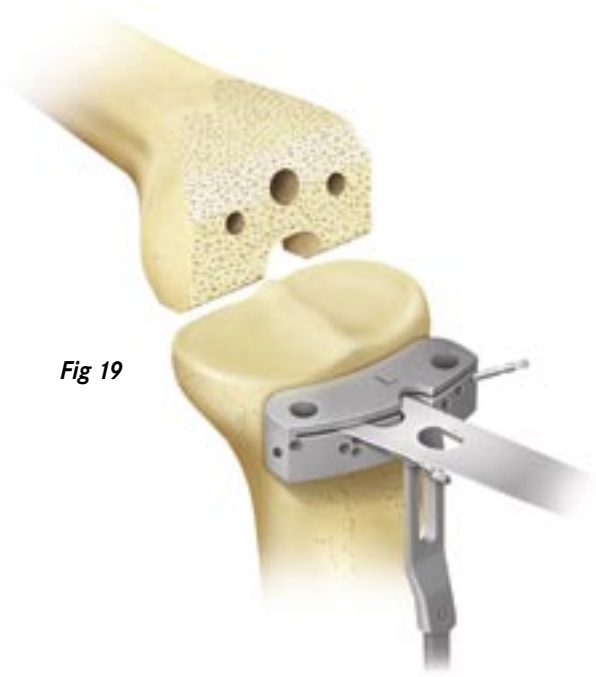


Fig 19

B) Tibial Intramedullary Technique

- Use the reamer drill to make a hole into intramedullary canal. Drill just far enough to find the canal. Make the hole just anterior to the tibial attachment of the anterior cruciate ligament, and a little behind the tibial tubercle [fig 20].
- Place the IM rod through the IM tibial guide and insert slowly into the intramedullary canal [fig 21]. When inserting, rotate in a clockwise direction so fluids can be aspirated.
- Attach the left or right tibial cutting block as appropriate to an IM tibial shaft. There is a choice of three: 0, 3 and 5 degree posterior slope options.
- Slide the IM shaft onto the arm of the IM tibial guide and slide it up until the cutting block touches the bone. Tighten the superior thumbscrew, which will engage on the flat upper surface of the arm.
- Rotate the tibial guide arm to point at the medial third of the tibial tubercle [fig 22].
- Set the level of resection by loosening the screw attaching the cutting block to the IM shaft and sliding it up or down using the hex head screw driver as a handle.

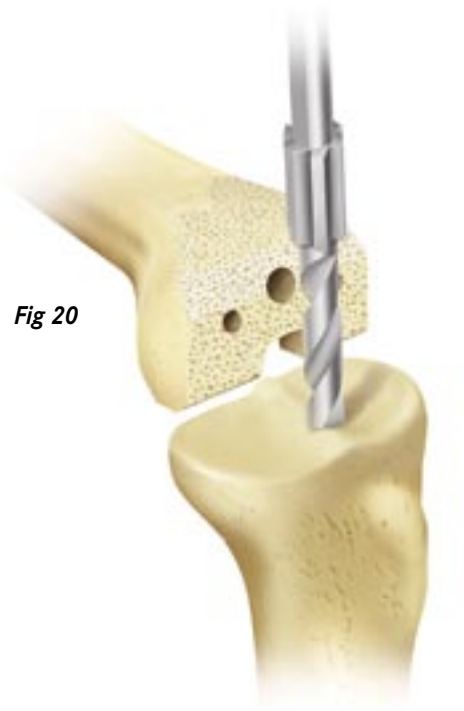


Fig 20

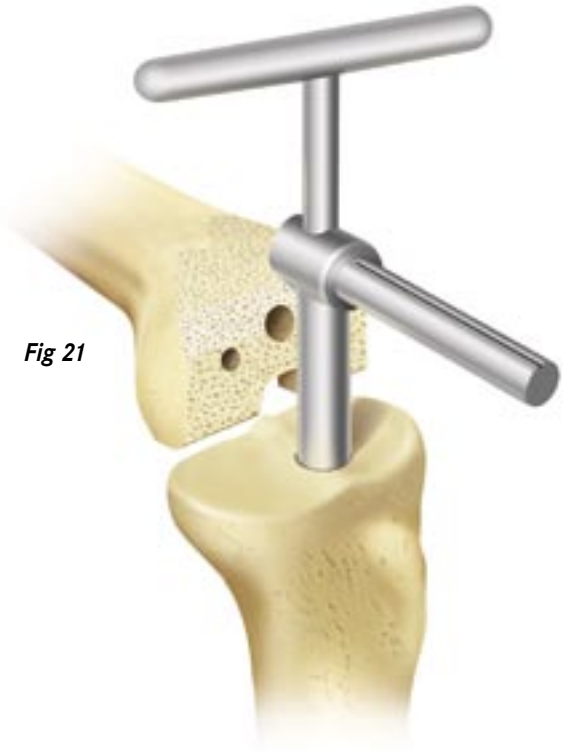


Fig 21

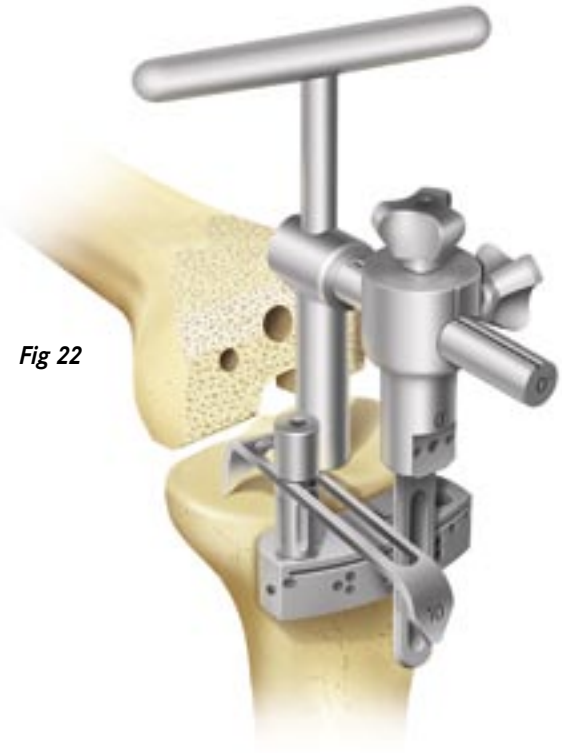


Fig 22

- The level of the resection can be judged either with the referencing finger placed through the slot of the cutting head [fig 23] or with the stylus, which is screwed into the cutting head. The stylus measures either a minimal 2mm cut under the defect or a 10mm cut typically from an intact lateral plateau. The stylus is clearly marked 2mm on one end and 10mm on the other.
- An extramedullary reference check can be made by: Attaching the universal handle to the IM shaft and dropping an EM alignment rod through it towards the ankle [fig 24]. Loosen both thumbscrews on the IM shaft and rotate the shaft until the EM rod is parallel to the mechanical axis. Tighten the lateral thumbscrew.
- Fix the cutting block to the bone with either fixation pins or quick release drills. In poor quality bone a cross pin can be used [fig 25].
- The resection is made through the slot in the tibial cutting block. Headless pins in the holes just below the cutting slot will act as a guide for the saw blade.
- If additional tibial resection is required, replace the tibial cutting block over the quick release drills using a higher set of holes. There is a 2mm gap between each level of holes [fig 26].

Fig 23

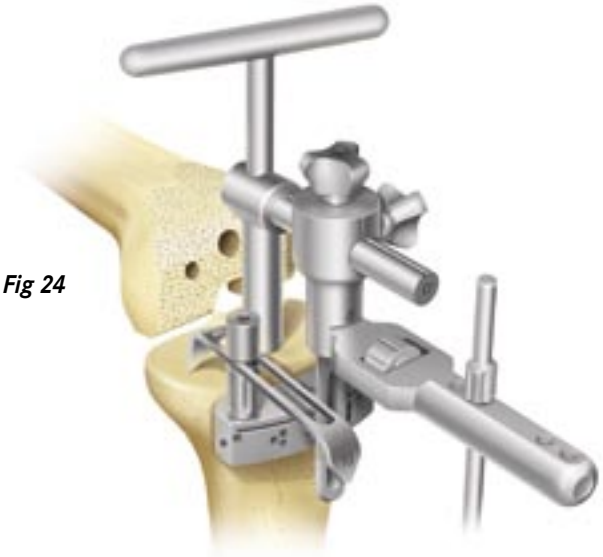


Fig 24

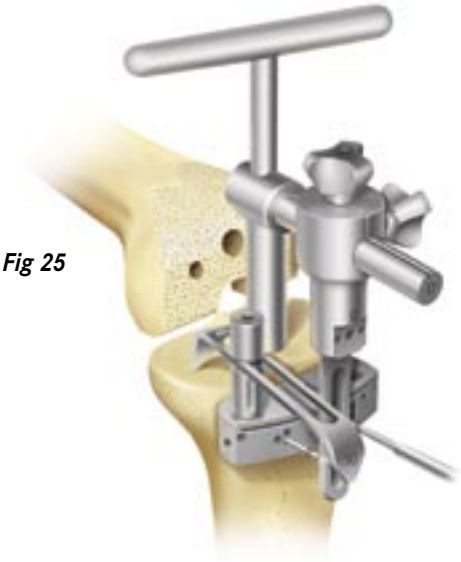


Fig 25

Fig 26

Step 9 – *Balancing the Flexion and Extension Gaps*

- Use the modular spacer block to assess the flexion gaps [fig 27] and the extension gaps [fig 28].

In balancing the flexion and extension gaps the following principles are fundamental:

- Distal femoral bone resection determines the soft tissue tension in extension.
- Posterior femoral bone resection determines the soft tissue tension in flexion.
- Tibial bone resection determines the soft tissue tension in both flexion and extension.

Note: The spacer block thickness equates to the thickness of the femoral implant posterior condyles and the tibial component.

The following Scenarios are possible:

Residual Flexion Contracture
In these cases it may be necessary to remove extra distal femur. This is done in the following manor:

- Determine the amount of bone resection required with the modular spacer block. (Flexion gap minus extension gap).
- Place two bone nail pins through the holes above the cutting slot in the distal recutting block.Three, five and seven millimetres of additional resection are available [fig 29].
- Apply the distal recutting block with the bone nails flush against the cut surface of the distal femur. (the block takes the three deg. taper of the anterior cut into account).
- Fix the distal recutting block with three bone nails [fig 30].
- Make the resection through the slot.
- Blade 'skiving' is common with distal recuts. Therefore extra care should be taken to ensure a level resection is made.
- Replace the appropriate contour block and recut the anterior and posterior chamfers.

Residual Tightness in Flexion and Extension.
This would imply either inadequate soft tissue releases or, more commonly inadequate bone cuts. Increase in the flexion and extension gaps can be achieved by resecting more proximal tibia.

Residual Tightness in Flexion
i.e. flexion gap less than extension gap. First check for posterior osteophytes which may be restricting flexion. Recession of the PCL may also allow greater flexion. The flexion gap can be increased by cutting the tibia with a posterior slope (no more than 7°).

Fig 27

Fig 28

Fig 29

Fig 30

Step 10 – *Determining the Tibial Component Size*

- Select an appropriate size of tibial template (63mm to 87mm medial/lateral in 4mm increments) and attach the universal handle. Place the template onto the resected tibial plateau and assess coverage [fig 31].

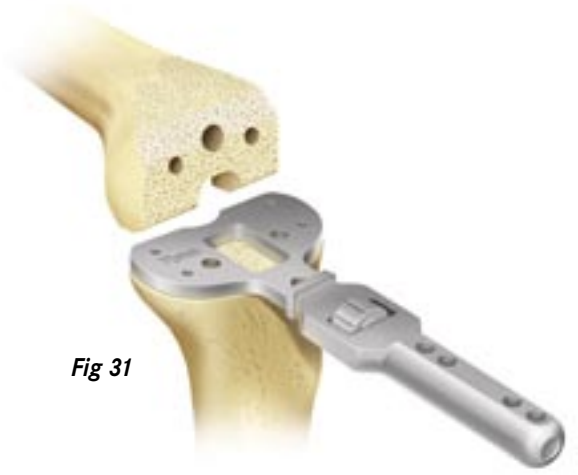


Fig 31

Step 11 – *Determining the Tibial Alignment*

With the femoral trial in place it is possible to determine the correct orientation and thickness of the tibial component using the tibial trials [fig 32].

Note: The tibial template must be removed for this method.

- When the joint space has been correctly filled, articulate the limb from flexion to extension a few times to align the tibial trial.
- Mark the anterior cortex of the tibia directly under the reference lines on the tibial trial. These can be used to re-align the template handle.
- Leg alignment should now be evaluated with the leg in full extension. If this is not satisfactory it may be necessary to perform a ligamentous release.
- Alternatively determine correct orientation of the tibial tray from anatomical landmarks: Insert the long EM alignment rod into the hole of the universal handle so that its inferior tip rests above the foot. The template can be rotated on the plateau until the rod lies over the mechanical axis, generally recognised to be one cm medial to the mid point between the malleoli.
- The template can now be pinned into position using two short bone nails.

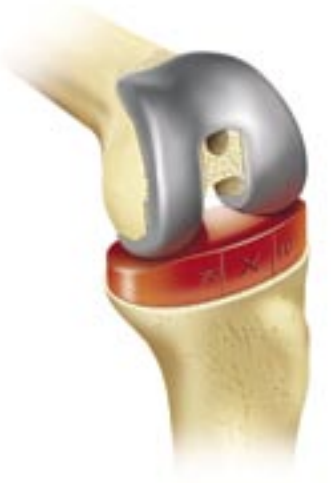


Fig 32

Step 12 – *Preparing the Tibial Plateau for the Stem*

The stems of the tibial components are of different lengths according to the size of the component.

- Place the tibial tower guide onto the tibial template and fix with the captured thumbscrew [fig 33].
- For cemented procedures use the tibial punch [fig 33]. Insert the punch into the tower and drive it down until the mark on the punch corresponds to the size of tibia chosen [fig 34], as indicated on the tower guide. In dense bone it maybe helpful to first use the cementless tibial chisel prior to using the tibial punch.
- For cementless procedures use the cementless tibial chisel in the same manner as described for the punch. This provides a tapered I-beam profile channel, fitting the stem exactly. A threaded hole in both the punch and chisel is provided for the insertion of a slap hammer to aid extraction.

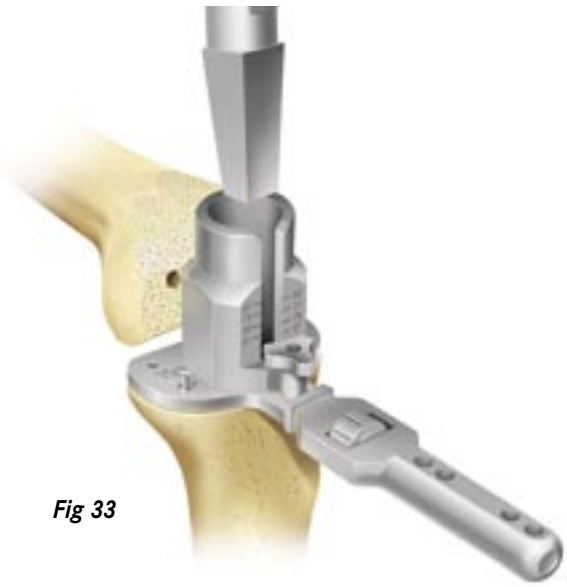


Fig 33

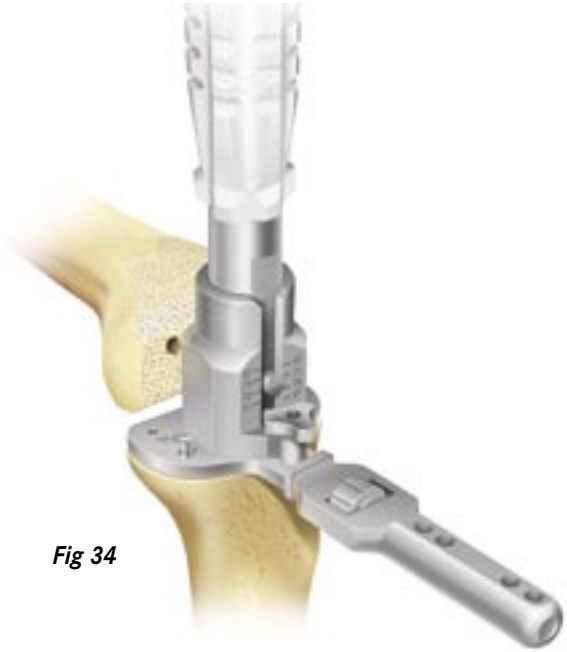


Fig 34

SURGICAL TECHNIQUE - AGC High Post Posterior Stabilised

Preparation of Femur

Follow steps 1 to 6 as for the AGC cruciate retaining.

Step 6A – *Intercondylar Box Resection*

- Place the box resection guide onto the resected femur [fig 35]. This should be lateralised by a couple of millimetres. Secure the guide with two bone nails or quick release drills.
- Resect along the inside of the guide with an oscillating saw to the depth of the box. (16mm anterior to posterior).
- Use the osteotome to remove the intercondylar bone [fig 36].
- Place the femoral box resection gauge into the resected intercondylar box to check that enough bone has been removed [fig 37]. Judge the depth from the PS line (i.e. Line A).

Fig 35

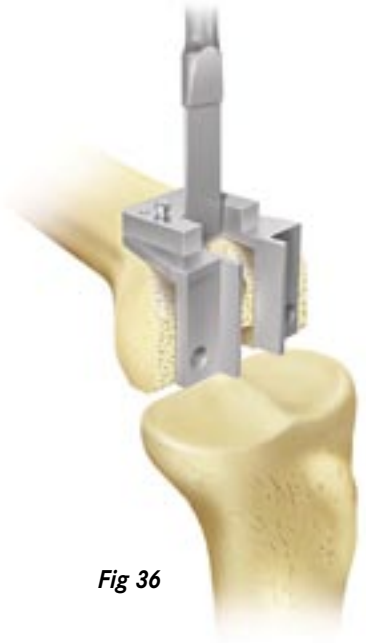


Fig 36

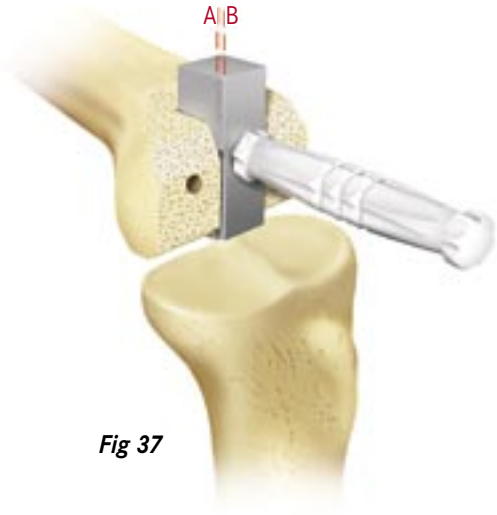


Fig 37

AGC High Post Posterior Stabilised

Step 7A – *Femoral Trialing*

- Using the femoral inserter/extractor place the appropriately sized trial AGC HPPS femoral component onto the resected bone. Impact until nearly seated, release the Femoral inserter/extractor and finish impacting with the Femoral impactor [fig 38].
- To remove the trial, use the femoral inserter/extractor in combination with the slap hammer [fig 39]. The pincer tips of the inserter/extractor fit securely into the recesses on the distal inner surface of the femoral trial.

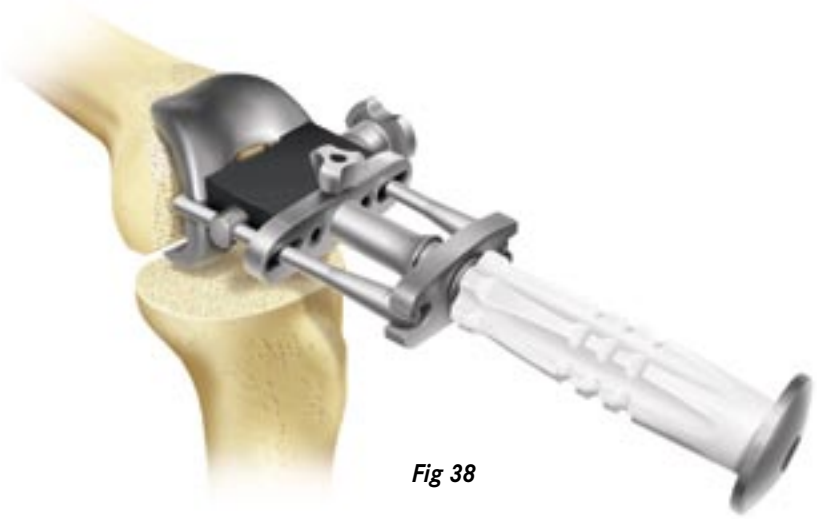


Fig 38

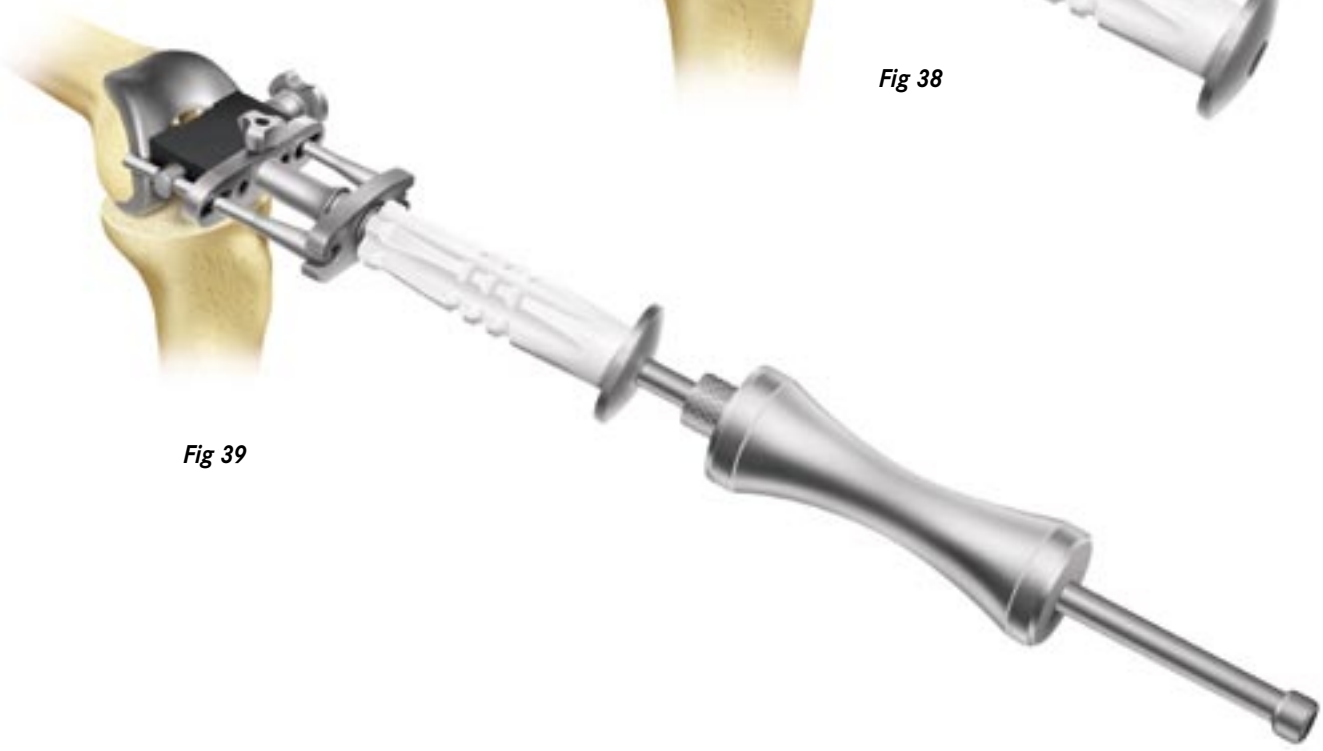


Fig 39

AGC High Post Posterior Stabilised
Tibial Preparation

Follow steps 8; as for the AGC cruciate retaining.

Step 10 – *Determining the Component Size*

- Select an appropriate size of tibial template (63mm to 87mm medial/lateral in 4mm increments) and attach the universal handle. Place the template onto the resected tibial plateau and assess coverage [fig 40].

Fig 40

Fig 41

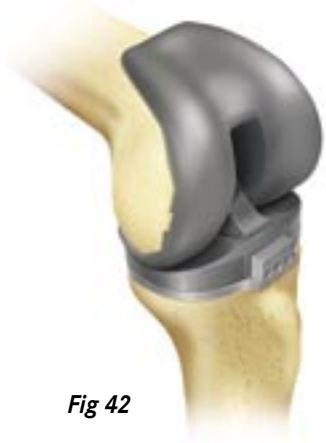


Fig 42

Step 11A – *Trial Reduction to Determine Tibial Component Sizing & Rotation*

- A trial reduction without tibial stem can be carried out in order to establish rotation of the tibial component.
- Assemble the appropriate trial base plate (minus trial stem) with the 10mm trial bearing Fig [41].
- Insert the femoral component with trial base plate and spacer [fig 42].
- Relocate the patella and flex/extend the knee.
- Ensure that the bearing's post aligns with the femoral components intercondylar box. Progressively increase trial bearing thickness until the desired joint tension is achieved. Medial/lateral stability should be achieved.
- Mark the position of the tibial trial in order to reference the correct tibial rotation.

Alternatively determine correct orientation of the tibial tray from anatomical landmarks: Insert the long EM alignment rod into the hole of the universal handle so that its inferior tip rests above the foot. The template can be rotated on the plateau until the rod lies over the mechanical axis, generally recognised to be one cm medial to the mid point between the malleoli.

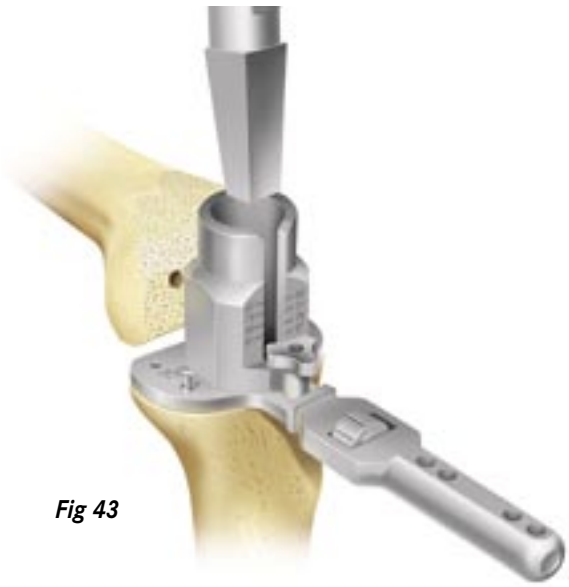


Fig 43

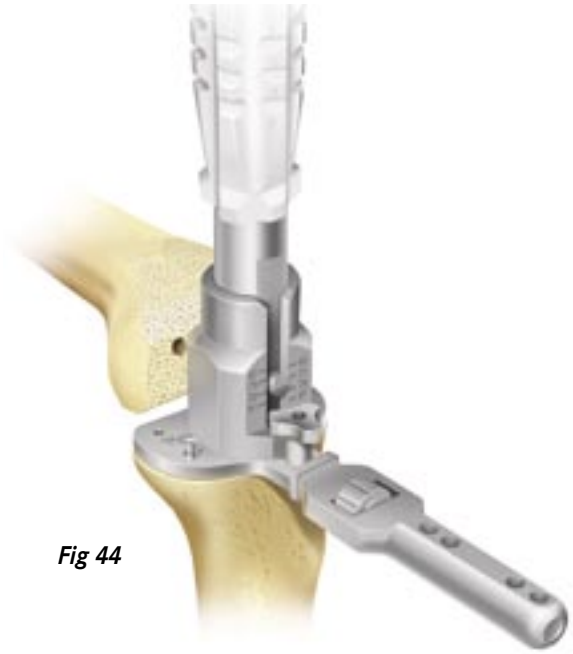


Fig 44

AGC High Post Posterior Stabilised

Step 12A – *Preparing the Tibial Plateau for the Stem*

Note: The stems of the tibial components are of different lengths according to the size of the component.

- Place the tibial tower guide onto the tibial template and fix with the captured thumbscrew [fig 43].

- For cemented procedures use the Tibial Punch. Insert the punch into the tower and drive it down until the mark on the punch corresponds to the size of tibia chosen [fig 44], as indicated on the tower guide. In dense bone it may be helpful to first use the cementless tibial chisel prior to using the tibial punch.

- For cementless procedures use the cementless tibial chisel in the same manner as described for the punch. This provides a tapered I-beam profile channel, fitting the stem exactly. A threaded hole in both the punch and chisel is provided for the insertion of a slap hammer to aid extraction.

AGC High Post Posterior Stabilised

Step 12B – *Trial Reduction with Trial Stem*

- The HPPS trial base plates are available in sizes 63mm to 87mm in 4mm increments. The trial bearings are available in 7 sizes: 63/67, 71/75, 79/83 and 87 in thicknesses 10mm to 22mm. One bearing will fit more than one base plate as shown in the table below.

Trial bearing	Compatible trial plate
63/67	63, 67
71/75	71, 75
79/83	79, 83
87/91	87

Note: The combined thickness of the trial base plate and trial bearing is the same as the definitive tibial component. There are two trial HPPS stems. A short one for use with base plate sizes: 63/67/71 & 75mm and a longer one for use with sizes: 79/83 & 87mm.

- Attach the correct trial stem onto the trial base plate using the hexhead screwdriver. This assembly with appropriate trial bearing is ready to be placed onto the tibia [fig 45].

- Seat the assembled tibial trial using the tibial impactor [fig 46].

- Alternatively, the tibial trial can be seated without the trial bearing [fig 47]. Once seated the trial bearing can be clipped in place.

- Ensure that the bearing's post aligns with the femoral components intercondylar box [fig 48].

- Articulate the knee to test for stability and alignment and if needed progressively increase or decrease the trial bearing thickness until the desired joint tension and stability is achieved.

Fig 45

Fig 46

Fig 47

Fig 48

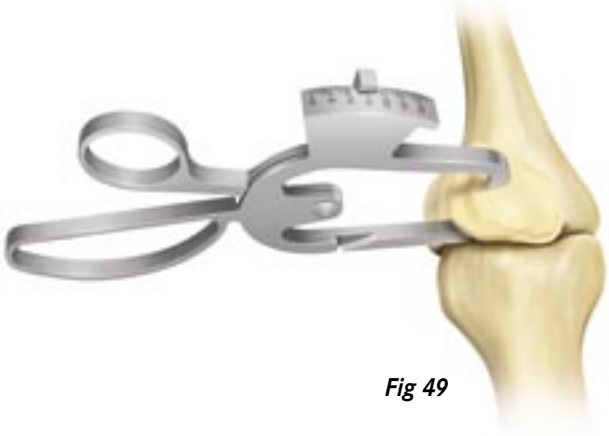


Fig 49

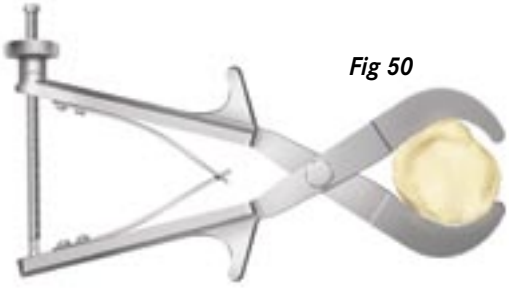


Fig 50

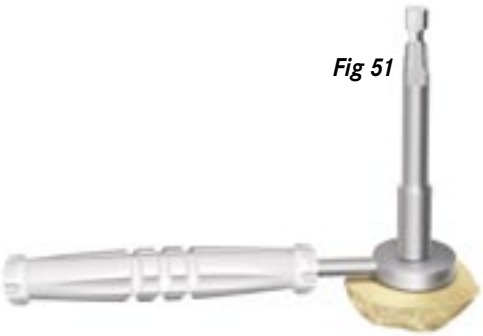


Fig 51

Fig 52

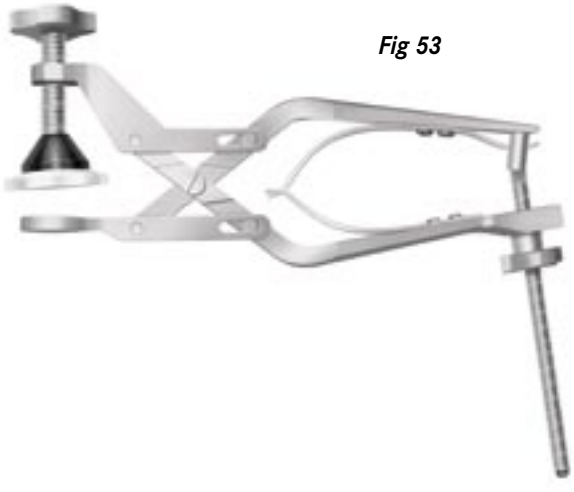


Fig 53

Step 13 – *Re-Surfacing the Patella*

- Remove peripheral osteophytes returning its shape to near normal anatomy.
- Measure the thickness of the unresected patella with the patella calliper [fig 49].
- Using the patella resecting clamp as a saw guide resect the patella at the level of the quadriceps tendon insertion and infrapatella ligament origin [fig 50].
- Place the patella drill guide medially over the resected surface using the spikes to prevent the guide sliding [fig 51].
- Drill to the stop with the patella stop drill.
- Put the appropriate patella trial [fig 52] in place and measure the construct with the patella calliper. The height should not exceed that of the unresected Patella.
- Check the patella tracking with the trial patella in place. It should slide freely in the trochlear groove without any external assistance, i.e. the 'no thumb test'. If it displays a tendency to slide off laterally then a lateral retinacular release will be necessary to restore correct patella tracking.
- Cement the patella in place using the patella clamp to pressurize the cement whilst it is setting [fig 53].

Note: The tourniquet can cause the patella to sublux laterally so should be down when patellar tracking.

Step 14 – *Cementing the Components*

- Use a small piece of resected bone to plug the femoral intramedullary canal to relieve any post-operative blood loss into the wound.
- All resected surfaces must be thoroughly cleaned, preferably with pressurised lavage and dried. It is advisable to use suction to remove the debris and liquid trapped in the cavities of the trabecular bone.
- Cement is applied to all the internal surfaces of the femoral component and to all the resected femoral bone surfaces. Similarly, cement is applied to the underside of the tibial component and the tibial plateau. The components can be implanted simultaneously or sequentially. In a tight knee, it may be easier to insert the tibial component first.
- Care should be taken to prevent scratching the polished metal surfaces of the femoral and tibial components.
- After impacting the components, care should be taken to remove all extruded surplus cement, especially from the posterior condyles of the femoral component. The cement can be pressurised whilst setting by extending the leg to 0° or slight hyperextension.

Ordering information - AGC® Implants

Femoral Components

PCL Retaining

Universal V2 Porous Femoral Components			
155411	55mm	155414	70mm
155412	60mm	155415	75mm
155413	65mm	155416	80mm

Universal V2 Interlok Femoral Components			
155421	55mm	155424	70mm
155422	60mm	155425	75mm
155423	65mm	155426	80mm

Anatomic Porous Femoral Components			
Right		Left	
152730	55mm	152740	55mm
152732	60mm	152742	60mm
152734	65mm	152744	65mm
152736	70mm	152746	70mm
152738	75mm	152748	75mm
152739	80mm	152749	80mm

Anatomic Interlok Femoral Components			
Right		Left	
152830	55mm	152840	55mm
152832	60mm	152842	60mm
152834	65mm	152844	65mm
152836	70mm	152846	70mm
152838	75mm	152848	75mm
152839	80mm	152849	80mm

PCL Substituting - Cam & Groove

Universal V2 PS Porous Femoral Components			
155431	55mm	155434	70mm
155432	60mm	155435	75mm
155433	65mm	155436	80mm

Universal V2 PS Interlok Femoral Components			
155441	55mm	155444	70mm
155442	60mm	155445	75mm
155443	65mm	155446	80mm

Anatomic PS Porous Femoral Components			
Right		Left	
155051	55mm	155041	55mm
155052	60mm	155042	60mm
155053	65mm	155043	65mm
155054	70mm	155044	70mm
155055	75mm	155045	75mm
155056	80mm	155046	80mm

Anatomic PS Interlok Femoral Components			
Right		Left	
155031	55mm	155021	55mm
155032	60mm	155022	60mm
155033	65mm	155023	65mm
155034	70mm	155024	70mm
155035	75mm	155025	75mm
155036	80mm	155026	80mm

PCL Substituting - High Post Posterior Stabilised (HPPS)

Universal Interlok Femoral Components	
151090	55mm
151091	60mm
151092	65mm
151093	70mm
151094	75mm

Porous coated components are designed for press fit application.
Interlok™ components are designed for cemented application.

Tibial Components

PCL Retaining and Substituting - (Cam & Groove)

V2 Porous Moulded Tibial Components (ArCom®)				V2 Interlok™ Moulded Tibial Components (ArCom®)			
158370	8 x 63mm	158410	8 x 79mm	158470	8 x 63mm	158510	8 x 79mm
158371	10 x 63mm	158411	10 x 79mm	158471	10 x 63mm	158511	10 x 79mm
158372	12 x 63mm	158412	12 x 79mm	158472	12 x 63mm	158512	12 x 79mm
158373	14 x 63mm	158413	14 x 79mm	158473	14 x 63mm	158513	14 x 79mm
158375	18 x 63mm	158415	18 x 79mm	158475	18 x 63mm	158515	18 x 79mm
158377	22 x 63mm	158417	22 x 79mm	158477	22 x 63mm	158517	22 x 79mm
158380	8 x 67mm	158420	8 x 83mm	158480	8 x 67mm	158520	8 x 83mm
158381	10 x 67mm	158421	10 x 83mm	158481	10 x 67mm	158521	10 x 83mm
158382	12 x 67mm	158422	12 x 83mm	158482	12 x 67mm	158522	12 x 83mm
158383	14 x 67mm	158423	14 x 83mm	158483	14 x 67mm	158523	14 x 83mm
158385	18 x 67mm	158425	18 x 83mm	158485	18 x 67mm	158525	18 x 83mm
158387	22 x 67mm	158427	22 x 83mm	158487	22 x 67mm	158527	22 x 83mm
158390	8 x 71mm	158430	8 x 87mm	158490	8 x 71mm	158530	8 x 87mm
158391	10 x 71mm	158431	10 x 87mm	158491	10 x 71mm	158531	10 x 87mm
158392	12 x 71mm	158432	12 x 87mm	158492	12 x 71mm	158532	12 x 87mm
158393	14 x 71mm	158433	14 x 87mm	158493	14 x 71mm	158533	14 x 87mm
158395	18 x 71mm	158435	18 x 87mm	158495	18 x 71mm	158535	18 x 87mm
158397	22 x 71mm	158437	22 x 87mm	158497	22 x 71mm	158537	22 x 87mm
158400	8 x 75mm	158440	8 x 91mm	158500	8 x 75mm	158540	8 x 91mm
158401	10 x 75mm	158441	10 x 91mm	158501	10 x 75mm	158541	10 x 91mm
158402	12 x 75mm	158442	12 x 91mm	158502	12 x 75mm	158542	12 x 91mm
158403	14 x 75mm	158443	14 x 91mm	158503	14 x 75mm	158543	14 x 91mm
158405	18 x 75mm	158445	18 x 91mm	158505	18 x 75mm	158545	18 x 91mm
158407	22 x 75mm	158447	22 x 91mm	158507	22 x 75mm	158547	22 x 91mm

Tibial Components *(continued)*

PCL Substituting - High Post (HPPS)

V2 HPPS Interlok™ Tibial Components (ArCom®)			
158959	63x10mm	158980	75x16mm
158960	63x12mm	158981	75x18mm
158961	63x14mm	158982	75x22mm
158962	63x16mm	158983	79x10mm
158963	63x18mm	158984	79x12mm
158964	63x22mm	158985	79x14mm
158965	67x10mm	158986	79x16mm
158966	67x12mm	158987	79x18mm
158967	67x14mm	158988	79x22mm
158968	67x16mm	158989	83x10mm
158969	67x18mm	158990	83x12mm
158970	67x22mm	158991	83x14mm
158971	71x10mm	158992	83x16mm
158972	71x12mm	158993	83x18mm
158973	71x14mm	158994	83x22mm
158974	71x16mm	158995	87x10mm
158975	71x18mm	158996	87x12mm
158976	71x22mm	158997	87x14mm
158977	75x10mm	158998	87x16mm
158978	75x12mm	158999	87x18mm
158979	75x14mm	159000	87x22mm

Sawblades	
32-401164	Oscillatory Sawblade Hall Type
32-401165	Oscillatory Sawblade Stryker Type
32-401166	Oscillatory Sawblade Howmedica Type
32-401167	Oscillatory Sawblade 3M Type
32-401168	Oscillatory Sawblade A.O Type
32-401195	Oscillatory Sawblade Stryker 2000 Type
32-401169	Oscillatory Sawblade 3M Maxi Drive Type

Pre-Operative Planning		
32-401455	AGC Universal V2 X-Ray Overlay	110%
32-401456	AGC Universal V2 X-Ray Overlay	115%
32-401457	AGC Universal V2 X-Ray Overlay	120%
32-401107	AGC Valgus Angle X-Ray Template	
32-400235	AGC HPPS V2 X-ray overlay	110%
32-400236	AGC HPPS V2 X-ray overlay	115%
32-400237	AGC HPPS V2 X-ray overlay	120%

Patella Components

ArCom® Patella Components		
11-150820	ArCom Poly Patella Button	31mm
11-150822	ArCom Poly Patella Button	34mm
11-150824	ArCom Poly Patella Button	37mm

Ordering information - AGC® REACT Instrumentation

37-100609: REACT AGC Reduced Kit

Case-1

Tray 1: Primary Femoral		
Cat. No.	*Description*	*Qty*
37-100011	REACT Intramedullary Rod	1
37-100026	REACT I/Medullary Drill/Reamer	1
37-100032	REACT E/Medullary Rod	1
37-100021	REACT Posterior Distal Cutting Block	1
37-100370	REACT AGC Resection Tower	1
37-100355	REACT AGC 5 deg Valgus Block	1
37-100357	REACT AGC 7 deg Valgus Block	1
37-100055	REACT AGC Distl Recut Block 3 deg	1
37-100050	REACT Universal Handle Assy	1
37-100150	Quick Release Chuck	1

Case-2

Tray 2: Femoral Finishing		
Cat. No.	*Description*	*Qty*
37-100555	REACT AGC Contour Block Assy 55	1
37-100560	REACT AGC Contour Block Assy 60	1
37-100565	REACT AGC Contour Block Assy 65	1
37-100570	REACT AGC Contour Block Assy 70	1
37-100575	REACT AGC Contour Block Assy 75	1
37-100060	Translating AP Positioner Assy	1
32-467261	Universal Step Drill - AGC	
37-100140	AP Positioner feet 3 deg. right	1
37-100141	AP Positioner feet 3 deg. left	1
37-467261	Stop Drill	2

Case-3

Tray 3 & 4: Femoral & Tibial Finishing		
Cat. No.	*Description*	*Qty*
32-468441	AGC V2 Univ Trial Femur 55mm	1
32-468442	AGC V2 Univ Trial Femur 60mm	1
32-468443	AGC V2 Univ Trial Femur 65mm	1
32-468444	AGC V2 Univ Trial Femur 70mm	1
32-468445	AGC V2 Univ Trial Femur 75mm	1
37-100200	AGC Tibial Trial 63 x 8mm	1
37-100201	AGC Tibial Trial 63 x 10mm	1
37-100202	AGC Tibial Trial 63 x 12mm	1
37-100203	AGC Tibial Trial 63 x 14mm	1
37-100205	AGC Tibial Trial 63 x 18mm	1
37-100220	AGC Tibial Trial 67 x 8mm	1
37-100221	AGC Tibial Trial 67 x 10mm	1
37-100222	AGC Tibial Trial 67 x 12mm	1
37-100223	AGC Tibial Trial 67 x 14mm	1
37-100225	AGC Tibial Trial 67 x 18mm	1
37-100240	AGC Tibial Trial 71 x 8mm	1
37-100241	AGC Tibial Trial 71 x 10mm	1
37-100242	AGC Tibial Trial 71 x 12mm	1
37-100243	AGC Tibial Trial 71 x 14mm	1
37-100245	AGC Tibial Trial 71 x 18mm	1
37-100260	AGC Tibial Trial 75 x 8mm	1
37-100261	AGC Tibial Trial 75 x 10mm	1
37-100262	AGC Tibial Trial 75 x 12mm	1
37-100263	AGC Tibial Trial 75 x 14mm	1
37-100265	AGC Tibial Trial 75 x 18mm	1
37-100280	AGC Tibial Trial 79 x 8mm	1
37-100281	AGC Tibial Trial 79 x 10mm	1
37-100282	AGC Tibial Trial 79 x 12mm	1
37-100283	AGC Tibial Trial 79 x 14mm	1
37-100285	AGC Tibial Trial 79 x 18mm	1
37-100300	AGC Tibial Trial 83 x 8mm	1
37-100301	AGC Tibial Trial 83 x 10mm	1
37-100302	AGC Tibial Trial 83 x 12mm	1
37-100303	AGC Tibial Trial 83 x 14mm	1
37-100305	AGC Tibial Trial 83 x 18mm	1
37-100134	Femoral Remover	1

37-100609: REACT AGC Reduced Kit *(continued)*

Case-4

Tray 5: Primary Tibial		
Cat. No.	*Description*	*Qty*
37-100024	REACT E/M Tibial Resector Assy	1
37-100023	REACT Ankle Clamp Assy	1
37-100120	R/Hand Tibial Cutting Block I/M E/M	1
37-100030	L/Hand Tibial Cutting Block I/M E/M	1
37-100048	REACT Tibial Stylus Assy -10mm Offset	1
37-100063	REACT AGC Tibial Template 63mm	1
37-100067	REACT AGC Tibial Template 67mm	1
37-100071	REACT AGC Tibial Template 71mm	1
37-100075	REACT AGC Tibial Template 75mm	1
37-100079	REACT AGC Tibial Template 79mm	1
37-100083	AGC Tibial Template 83mm	1
37-100005	REACT Tower Guide	
37-100006	REACT AGC Tibial Stem Punch	1
37-100100	REACT AGC Tibial Stem Chisel	1

Case-5

Tray 6: General Instruments		
Cat. No.	*Description*	*Qty*
37-100002	REACT Pin Puller Assy	1
37-100003	Anterior Reference Finger	1
37-100025	REACT Inserter/Alignment	1
37-100027	REACT Hexagon Driver Assy	1
37-100155	REACT Tibial Tibial Tray Impactor Assy	1
37-100004	REACT Femoral Impactor Assy	1
37-100008	REACT Puller Nail - 3.2mm dia	4
37-467619	Quick Release Drills Bit	4

Case-6

Tray 7: Patella Instrumentation		
Cat. No.	*Description*	*Qty*
32-467189	AGC Patella Saw Guide	1
32-467249	Patella Clamp	1
37-100376	Millennium Patella Drill Guide	1
37-100199	REACT Patella Caliper	1
37-100391	Millennium Patella Trial Small	1
37-100394	Millennium Patella Trial Medium	1
37-100397	Millennium Patella Trial Large	1
37-100531	REACT 31mm Three Peg Patella	1
37-100534	REACT 34mm Three Peg Patella	1
37-100537	REACT 37mm Three Peg Patella	1
37-100540	REACT 31mm Drill Guide	1
37-100541	REACT 34/37mm Drill Guide	1
37-100381	Patella Stop Drill AGC	1

37-100605: REACT AGC Standard Kit

Case-1

Tray 1: Primary Femoral		
Cat. No.	*Description*	*Qty*
37-100011	REACT Intramedullary Rod	1
37-100026	REACT i/Medullary Drill/Reamer	1
37-100032	REACT E/Medullary Rod=Wip	1
37-100021	REACT Posterior Distal Cutting Block	1
37-100022	REACT Resection Block Tower Add	1
37-100016	REACT Variable Valgus Guide Add	1
37-100055	REACT AGC DistL Recut Block 3 deg	1
37-100052	REACT PIN Impactor Instr Assy	1
37-100050	REACT Universal Handle Assy	1
37-100150	Quick Release Chuck	1

Case-2

Tray 2: Femoral Finishing

Cat. No.	*Description*	*Qty*
37-100555	REACT AGC Contour Block Assy 55	1
37-100560	REACT AGC Contour Block Assy 60	1
37-100565	REACT AGC Contour Block Assy 65	1
37-100570	REACT AGC Contour Block Assy 70	1
37-100575	REACT AGC Contour Block Assy 75	1
37-100059	AGC Flexion Gauge	1
37-100060	Translating AP Positioner Assy	1
32-467261	Universal Step Drill - AGC	2
37-100140	AP Positioner feet 3 deg. right	1
37-100141	AP Positioner feet 3 deg. left	1

Case-3

Tray 3: Femoral Trials		
Cat. No.	*Description*	*Qty*
32-468441	AGC V2 Univ Trial Femur 55mm	1
32-468442	AGC V2 Univ Trial Femur 60mm	1
32-468443	AGC V2 Univ Trial Femur 65mm	1
32-468444	AGC V2 Univ Trial Femur 70mm	1
32-468445	AGC V2 Univ Trial Femur 75mm	1
37-100061	Femoral Inserter/Extractor Assy	

Tray 4: Tibial Trials

Cat. No.	*Description*	*Qty*
32-100200	AGC Tibial Trial 63 x 8mm	1
32-100201	AGC Tibial Trial 63 x 10mm	1
32-100202	AGC Tibial Trial 63 x 12mm	1
32-100203	AGC Tibial Trial 63 x 14mm	1
32-100205	AGC Tibial Trial 63 x 18mm	1
32-100220	AGC Tibial Trial 67 x 8mm	1
32-100221	AGC Tibial Trial 67 x 10mm	1
32-100222	AGC Tibial Trial 67 x 12mm	1
32-100223	AGC Tibial Trial 67 x 14mm	1
32-100225	AGC Tibial Trial 67 x 18mm	1
32-100240	AGC Tibial Trial 71 x 8mm	1
32-100241	AGC Tibial Trial 71 x 10mm	1
32-100242	AGC Tibial Trial 71 x 12mm	1
32-100243	AGC Tibial Trial 71 x 14mm	1
32-100245	AGC Tibial Trial 71 x 18mm	1
32-100260	AGC Tibial Trial 75 x 8mm	1
32-100261	AGC Tibial Trial 75 x 10mm	1
32-100262	AGC Tibial Trial 75 x 12mm	1
32-100263	AGC Tibial Trial 75 x 14mm	1
32-100265	AGC Tibial Trial 75 x 18mm	1
32-100280	AGC Tibial Trial 79 x 8mm	1
32-100281	AGC Tibial Trial 79 x 10mm	1
32-100282	AGC Tibial Trial 79 x 12mm	1
32-100283	AGC Tibial Trial 79 x 14mm	1
32-100285	AGC Tibial Trial 79 x 18mm	1
32-100300	AGC Tibial Trial 83 x 8mm	1
32-100301	AGC Tibial Trial 83 x 10mm	1
32-100302	AGC Tibial Trial 83 x 12mm	1
32-100303	AGC Tibial Trial 83 x 14mm	1
32-100305	AGC Tibial Trial 83 x 18mm	1

37-100605: REACT AGC Standard Kit *(continued)*

Case-4

Tray 5: Primary Tibial		
Cat. No.	*Description*	*Qty*
37-100024	REACT E/M Tibial Resector Assy	1
37-100062	E/M 5 deg Shaft	1
37-100023	REACT Ankle Clamp Assy	1
37-100120	R/Hand Tibial Cutting Block I/M E/M	1
37-100030	L/Hand Tibial Cutting Block I/M E/M	1
37-100048	REACT Tibial Stylus Assy-10mm Offset	1
37-100045	REACT I/M Tibial Resector	1
37-100047	5 deg I/Medullary Shaft	1
37-100063	REACT AGC Tibial Template 63mm	1
37-100067	REACT AGC Tibial Template 67mm	1
37-100071	REACT AGC Tibial Template 71mm	1
37-100075	REACT AGC Tibial Template 75mm	1
37-100079	REACT AGC Tibial Template 79mm	1
37-100083	REACT AGC Tibial Template 83mm	1
37-100005	REACT Tower Guide	1
37-100006	REACT AGC Tibial Stem Punch	1
37-100006	REACT AGC Tibial Stem Chisel	1

Case-5

Tray 6: General Instruments		
Cat. No.	*Description*	*Qty*
37-100007	REACT Slap Hammer Assy	1
37-100002	REACT Pin Puller Assy	1
37-100003	Anterior Reference Finger	1
37-100044	Rasp	1
37-100025	REACT Inserter/Alignment Assy	1
37-100027	REACT Hexagon Driver Assy	1
32-100022	Glass Block	1
37-100155	REACT Tibial Tray Impactor Assy	1
37-100004	REACT Femoral Impactor Assy	1
37-100008	REACT Puller Nail 3.2mm dia	4
32-467619	Quick Release Drills Bit	4

Case-6

Tray 7: Patella Instrumentation		
Cat. No.	*Description*	*Qty*
32-467189	AGC Patella Saw Guide	1
32-467249	Patella Clamp	1
37-100376	Millennium Patella Drill Guide	1
37-100199	REACT Patella Caliper	1
37-100391	Millennium Patella Trial Small	1
37-100394	Millennium Patella Trial Medium	1
37-100397	Millennium Patella Trial Large	1
37-100531	REACT 31mm Three Peg Patella	1
37-100534	REACT 34mm Three Peg Patella	1
37-100537	REACT 37mm Three Peg Patella	1
37-100540	REACT 31mm Drill Guide	1
37-100541	REACT 34/37mm Drill Guide	1
37-100381	Patella Stop Drill AGC	1

37-100602: REACT AGC Extended Kit

Case-1

Tray 1: Primary Femoral		
Cat. No.	*Description*	*Qty*
37-100011	REACT Intramedullary Rod	1
37-100058	Short Intramedullary Rod	1
37-100026	REACT I/Medullary Drill/Reamer	1
37-100032	REACT E/M Alignment Rod	1
37-100021	REACT Distal Cutting Block	1
37-100022	REACT Resection Block Tower Add	1
37-100016	REACT Variable Valgus Guide Add	1
37-100055	REACT AGC Distl Recut Block 3 deg	1
37-100052	REACT Pin Impactor Instr Assy	1
37-100050	REACT Universal Handle Assy	1
37-100150	Quick Release Chuck	1

Case-2

Tray 2: Femoral Finishing		
Cat. No.	*Description*	*Qty*
37-100555	REACT AGC Contour Block Assy 55	1
37-100560	REACT AGC Contour Block Assy 60	1
37-100565	REACT AGC Contour Block Assy 65	1
37-100570	REACT AGC Contour Block Assy 70	1
37-100580	REACT AGC Contour Block Assy 80	1
37-100059	AGC Flexion Gauge	1
37-100060	Translating AP Positioner Assy	1
32-467261	Universal Step Drill AGC	2
37-100140	3 deg Foot Right REACT Instr	1
37-100141	3 deg Foot Left REACT Instr	1

Case-3

Tray 3: Femoral Trials		
Cat. No.	*Description*	*Qty*
32-468441	AGC V2 Univ Trial Fem 55mm	1
32-468442	AGC V2 Univ Trial Fem 60mm	1
32-468443	AGC V2 Univ Trial Fem 65mm	1
32-468444	AGC V2 Univ Trial Fem 70mm	1
32-468445	AGC V2 Univ Trial Fem 75mm	1
32-468446	AGC V2 Univ Trial Fem 80mm	1
37-100061	Femoral Inserter/Extractor Assy	

Tray 4: Tibial Trials		
Cat. No.	*Description*	*Qty*
37-100200	AGC Tibial Trial 63 x 8mm	1
37-100201	AGC Tibial Trial 63 x 10mm	1
37-100202	AGC Tibial Trial 63 x 12mm	1
37-100203	AGC Tibial Trial 63 x 14mm	1
37-100205	AGC Tibial Trial 63 x 18mm	1
37-100207	AGC Tibial Trial 63 x 22mm	1
37-100220	AGC Tibial Trial 67 x 8mm	1
37-100221	AGC Tibial Trial 67 x 10mm	1
37-100222	AGC Tibial Trial 67 x 12mm	1
37-100223	AGC Tibial Trial 67 x 14mm	1
37-100225	AGC Tibial Trial 67 x 18mm	1
37-100227	AGC Tibial Trial 67 x 22mm	1
37-100240	AGC Tibial Trial 71 x 8mm	1
37-100241	AGC Tibial Trial 71 x 10mm	1
37-100242	AGC Tibial Trial 71 x 12mm	1
37-100243	AGC Tibial Trial 71 x 14mm	1
37-100245	AGC Tibial Trial 71 x 18mm	1
37-100247	AGC Tibial Trial 71 x 22mm	1
37-100260	AGC Tibial Trial 75 x 8mm	1
37-100261	AGC Tibial Trial 75 x 10mm	1
37-100262	AGC Tibial Trial 75 x 12mm	1
37-100263	AGC Tibial Trial 75 x 14mm	1
37-100265	AGC Tibial Trial 75 x 18mm	1
37-100267	AGC Tibial Trial 75 x 22mm	1
37-100280	AGC Tibial Trial 79 x 8mm	1
37-100281	AGC Tibial Trial 79 x 10mm	1
37-100282	AGC Tibial Trial 79 x 12mm	1
37-100283	AGC Tibial Trial 79 x 14mm	1
37-100285	AGC Tibial Trial 79 x 18mm	1
37-100287	AGC Tibial Trial 79 x 22mm	1
37-100300	AGC Tibial Trial 83 x 8mm	1
37-100301	AGC Tibial Trial 83 x 10mm	1
37-100302	AGC Tibial Trial 83 x 12mm	1
37-100303	AGC Tibial Trial 83 x 14mm	1
37-100305	AGC Tibial Trial 83 x 18mm	1
37-100307	AGC Tibial Trial 83 x 22mm	1

37-100602: REACT AGC Extended Kit *(continued)*

Case-3

Tray 4: Tibial Trials Contd.		
Cat. No.	*Description*	*Qty*
37-100320	AGC Tibial Trial 87 x 8mm	1
37-100321	AGC Tibial Trial 87 x 10mm	1
37-100322	AGC Tibial Trial 87 x 12mm	1
37-100323	AGC Tibial Trial 87 x 14mm	1
37-100325	AGC Tibial Trial 87 x 18mm	1
37-100327	AGC Tibial Trial 87 x 22mm	1
37-100340	AGC Tibial Trial 91 x 8mm	1
37-100341	AGC Tibial Trial 91 x 10mm	1
37-100342	AGC Tibial Trial 91 x 12mm	1
37-100343	AGC Tibial Trial 91 x 14mm	1
37-100345	AGC Tibial Trial 91 x 18mm	1
37-100347	AGC Tibial Trial 91 x 22mm	1

Case-4

Tray 5: Primary Tibial		
Cat. No.	*Description*	*Qty*
37-100024	REACT E/M Tibial Resector Assy	1
37-100062	E/M 5 deg Shaft	1
37-100023	REACT Ankle Clamp Assy	1
37-100120	R/Hand Tibial Cutting Block I/M E/M	1
37-100030	L/Hand Tibial Cutting Block I/M E/M	1
37-100048	REACT Tibial Stylus Assy	1
37-100045	REACT I/M Tibial Resector Assy	1
37-100047	5 deg I/Medullary Resector Shaft	1
37-100063	REACT AGC Tibial Template 63mm	1
37-100067	REACT AGC Tibial Template 67mm	1
37-100071	REACT AGC Tibial Template 71mm	1
37-100075	REACT AGC Tibial Template 75mm	1
37-100079	REACT AGC Tibial Template 79mm	1
37-100083	REACT AGC Tibial Template 83mm	1
37-100087	REACT AGC Tibial Template 87mm	1
37-100091	REACT AGC Tibial Template 91mm	1
37-100005	REACT AGC Tower Guide	1
37-100006	REACT AGC Tibial Stem Punch	1
37-100006	REACT AGC Tibial Stem Chisel	1

Case-5

Tray 6: General Instrumentation		
Cat. No.	*Description*	*Qty*
37-100007	REACT Slap Hammer Assy	1
37-100002	REACT Pin Puller Assy	1
37-100003	Anterior Reference Finger	1
37-100044	REACT AGC Rasp	1
37-100025	REACT Inserter/Alignment Assy	1
37-100027	REACT Hexagon Driver Assy	1
32-401122	Glass Block	1
37-100155	REACT AGC Tibial Tray Impactor Assy	1
37-100004	REACT Femoral Impactor Assy	1
37-100008	REACT Bone Nail (STD)	4
32-467619	Quick Release Drill Bit	4

Case-6

Tray 7: Patella Instrumentation		
Cat. No.	*Description*	*Qty*
32-467189	AGC Patella Saw Guide	1
32-467249	Patella Clamp	1
37-100376	Millennium Patella Drill Guide	1
37-100199	REACT Patella Caliper	1
37-100391	Millennium Patella Trial Small	1
37-100394	Millennium Patella Trial Medium	1
37-100397	Millennium Patella Trial Large	1
37-100531	REACT 31mm Three Peg Patella	1
37-100534	REACT 34mm Three Peg Patella	1
37-100537	REACT 37mm Three Peg Patella	1
37-100540	REACT 31mm Drill Guide	1
37-100541	REACT 34/37mm Drill Guide	1
37-100381	Patella Stop Drill AGC	1

37-100610: REACT AGC HPPS SET

REACT AGC HPPS Set		
Cat. No.	*Description*	*Qty*
32-467020	AGC V2 Univ. HPPS Trial Femoral 55mm	1
32-467021	AGC V2 Univ. HPPS Trial Femoral 60mm	1
32-467022	AGC V2 Univ. HPPS Trial Femoral 65mm	1
32-467023	AGC V2 Univ. HPPS Trial Femoral 70mm	1
32-467024	AGC V2 Univ. HPPS Trial Femoral 75mm	1
37-100910	REACT AGC HPPS Tibial Trial 63/67 x 10	1
37-100912	REACT AGC HPPS Tibial Trial 63/67 x 12	1
37-100914	REACT AGC HPPS Tibial Trial 63/67 x 14	1
37-100918	REACT AGC HPPS Tibial Trial 63/67 x 18	1
37-100930	REACT AGC HPPS Tibial Trial 71/75 x 10	1
37-100932	REACT AGC HPPS Tibial Trial 71/75 x 12	1
37-100934	REACT AGC HPPS Tibial Trial 71/75 x 14	1
37-100938	REACT AGC HPPS Tibial Trial 71/75 x 18	1
37-100952	REACT AGC HPPS Tibial Trial 79/83 x 12	1
37-100954	REACT AGC HPPS Tibial Trial 79/83 x 14	1
37-100958	REACT AGC HPPS Tibial Trial 79/83 x 10	1
37-100863	Base Plate-Rev/HPPS Tibial Trial - 63	1
37-100867	Base Plate-Rev/HPPS Tibial Trial - 67	1
37-100871	Base Plate-Rev/HPPS Tibial Trial - 71	1
37-100875	Base Plate-Rev/HPPS Tibial Trial - 75	1
37-100879	Base Plate-Rev/HPPS Tibial Trial - 79	1
37-100883	Base Plate-Rev/HPPS Tibial Trial - 83	1
37-100842	Tibial Trial Base Plate Impactor Assy	1
37-100843	Tibial Impactor Assy = AGC HPPS	1
32-420202	AGC V2 HPPS Trial Tib Stem 63-75mm	1
32-420203	AGC V2 HPPS Trial Tib Stem 69-87mm	1
32-420204-1	AGC V2 HPPS Trial Tib Stem Screw	1
37-100890	HPPS Tibial Template Shaft Aug Block	1
32-348005	Femoral Box Cutting Guide	1
37-100858	Notch Guide Chisel = Maxim Style	1
32-100859	Maxim Style Box with Check Block	1

Notes