Revision Knee Systems
Product Selection Guide
Disclaimer

Biomet UK Ltd., as the manufacturer of these devices, does not practice medicine and does not recommend any particular surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and utilising the appropriate techniques for implanting prosthesis in each individual patient.

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- For both revision and complex primary indications where a high degree of varus/valgus support is required
- Deformities
- Ligamentous deficiencies
  - Replaces ACL, PCL and LCL
  - MCL does not have to be intact but must provide some stability
- Bone loss
- Multiple revision arthroplasties

VANGUARD Super Stabilized Knee
- A revision implant forming part of the Vanguard Complete Knee System
- For revision cases with limited bone loss on the femoral side
- A fixed bearing constrained condylar
- Distal femoral resurfacing up to 24mm
- Proximal tibial resurfacing up to 40mm with 16mm augment
- Standard range of stems and augments
- Cemented and cementless stems
- Offset tibial adapter available in neutral, 2.5mm and 5.0mm

Stanmore Hinge Knee®
- Hinged articulation
- Basic implant
- Simple instrumentation
- Unique size (left or right)
- 150mm stem length

RHK® - Rotating Hinge Knee
- A stand-alone system
- For complex cases with bone loss and instability, trauma, oncology
- Bi-helical self-centering rotating platform providing:
  - Stability
  - Restoring function
  - Protecting fixation
- Distal femoral resurfacing up to 50mm
- Proximal tibial resurfacing up to 45mm
- Standard range of stems and augments
- Cemented and cementless stems

DA360
- A stand-alone system
- For revision cases with limited bone loss on the femoral side
- Bi-helical self-centering rotating platform providing:
  - Stability
  - Restoring function
  - Protecting fixation
- Distal femoral resurfacing up to 19mm
- Proximal tibial resurfacing up to 41mm with 15mm augment
- Standard range of stems and augments
- Cemented and cementless stems
- Offset tibial adapter available in 2.5mm and 5.0mm

Compress®
- A unique patented device that directly links biologically the OSS implant to the end of the bone
- A bone-inducing, biomechanically sound alternative to stems
- The Compress® system allows the surgeon to maintain the patient’s own bone stock when faced with major revision joint surgery
- Available for proximal femur, distal femur and proximal tibia

OSS - Orthopaedic Salvage System
- A stand-alone system
- For very complex cases
- One system “does it all” from resurfacing through segmental to total femoral replacement
- Rotating tibial bearing and hinged articulation
- Distal femoral resurfacing up to 70mm, increased modularity allowing total femur reconstruction if required
- Proximal tibial replacement up to 92mm with monoblock tibia
- Increased proximal tibial replacement length with 90mm segmental tibia and diaphyseal segments
- Extensive range of stems and augments
- Cemented and cementless stems
VANGUARD SSK Design Features

Deep Swept Back Trochlear Groove:
• Designed to reduce patella forces in deep flexion

Left and Right Femoral Components:
• Manufactured in cast cobalt chromium alloy
• 55mm and 60mm (small box)
• 65mm, 70mm, 75mm and 80mm (standard box)

Extended Trochlear Groove:
• Allows the patella to maintain full contact with the femur in deep flexion

Curved Tibial Post:
• Provides stability and continued constraint in deep flexion

Deeper Anterior Cut-Out:
• Minimises the potential for patella impingement during high flexion

SSK Tibia:
• Loads are distributed more evenly through a greater tibiofemoral contact area

Interchangeable Constraint Bearings Options:
• SSK PS or Con bearings can be utilised with the Vanguard SSK femur

Direct Compression Moulded ArCom® Polyethylene:
• Provides proven wear resistance

Compressively Loaded Tibial Locking Mechanism:
• Provides proven resistance to tibial micromotion

Tibial Augmentation Blocks:
• Manufactured in titanium alloy
• Medial / lateral augmentation spacers mechanically attached to the tibial tray to help restore the joint line and make up defects
• Available in 6mm, 10mm and 16mm blocks

Five Degrees Valgus Stem Angle:
• Accepts multiple stem lengths in straight and curved profiles to match the patient’s anatomy

Splined Titanium Alloy Extensions:
• Designed for cementless use
• Interchangeable between the Vanguard femoral and tibial components
• Stems of 16mm diameter and above have a coronal split in the distal tip to reduce stiffness and the possibility of thigh pain
• 80mm long (dia. 10mm to 24mm in 2mm increments)
• 120mm long (dia. 12mm to 22mm in 2mm increments)
• 160mm long with anterior bow (dia. 12mm to 22mm in 2mm increments)

Tibial Augmentation Blocks:
• Manufactured in titanium alloy
• Individual posterior and distal augmentation blocks are available in 5mm, 10mm and 15mm (distal only) thicknesses for patients with inadequate bone stock

High Dislocation Height:
• Provides up to 23mm of dislocation resistance

Increased Post/Box Contact:
• At 90° flexion, 17mm of the tibial post remains in the box

Stability:
• The Vanguard Con tibial bearing is designed to allow for only +/- 1mm of varus/vaguliff lift-off and +/- 0.5mm of rotational freedom

Tibial Bearing:
• 59mm for 55/60mm femoral components
• 63/67mm and 71/75mm for all sizes
• 79/83mm and 87/91mm for 65/70/75/80mm femoral components
• All sizes available in 10 to 24mm thickness in 2mm increments

Versatile Sizing Rationale:
• Nine plate sizes (59, 63, 67, 71, 75, 79, 83, 87 and 91mm) provide superior tibial coverage

Offset Tibial Tray:
• Tibial offset is proximal and provides complete rotational freedom for placement of offset
• Available in neutral, 2.5mm and 5.0mm offsets

DA360 Design Features

Titanium Alloy Extensions:
- Designed for cemented use
- Universal for both femoral and tibial components
- 40mm long (dia. 10mm to 24mm in 2mm increments)
- 80mm long (dia. 10mm to 16mm in 2mm increments)
- 120mm long (dia. 10mm to 16mm in 2mm increments)
- Optional 160mm (straight & bowed) and 200mm (straight & bowed)

Deeper Anterior Cut-Out:
- Minimises the potential for patella impingement during high flexion

Intercondylar Box:
- Provides varus/valgus stability
- Implant allows controlled flexion up to 130˚
- Prevents hyper extension

High Dislocation Height:
- 27.5mm tall
- Provides up to 21mm of dislocation resistance at 90° flexion

Splined Titanium Alloy Extensions:
- Designed for cementless use
- Universal for both femoral and tibial components
- Stems of 16mm diameter and above have a coronal split in the distal tip to reduce stiffness and the possibility of thigh pain
- 80mm long (dia. 10mm to 24mm in 2mm increments)
- 120mm long (dia. 12mm to 22mm in 2mm increments)
- Optional 160mm (straight & bowed) and 200mm (straight & bowed)

Anatomic Femoral Component:
- Manufactured in cast cobalt chromium alloy
- Left and right sided components with a deep patella groove
- Full size interchangeability with any of the tibial components

Five Anatomical Femoral Components:
- 55, 60, 65, 70 and 75mm

Direct Compression Moulded ArCom® Polyethylene:
- Provides proven wear resistance

Intercondylar Box:
- Provides varus/valgus stability
- Implant allows controlled flexion up to 130˚
- Prevents hyper extension

Tibial Component:
- Manufactured in cast cobalt chromium alloy
- Seven plate sizes (59, 63, 67, 71, 75, 79 and 83mm) provide excellent tibial coverage

Centralising Bi-Helical Tibial Tray Bearing Interface:
- Mimics the “screw home” mechanism by centralising under body weight
- Provides the patient with an increased degree of confidence in the stability of their knee replacement

Seven Degrees Valgus Stem Angle:
- Accepts multiple stem lengths in straight and curved profiles to match the patient’s anatomy

Deeper Anterior Cut-Out:
- Minimises the potential for patella impingement during high flexion

Tibial Bearing Sizes:
- 59mm, 63/67mm, 71/75mm and 79/83mm
- All sizes available in 8 to 20mm thickness in 2mm increments

Tibial Augmentation Blocks:
- Manufactured in titanium alloy
- Medial / lateral augmentation spacers mechanically attached to the tibial tray to help restore the joint line and make up for the bone defect
- Available in 5mm, 10mm and 15mm blocks

Offset Tibial Adapter:
- Manufactured in titanium alloy
- Provides complete rotational freedom for placement of offset
- Available in 2.5mm and 5.0mm offsets
- Easy dialling for accurate offset selection
- Robust assembly using Morse taper and secondary screw fixation

Femoral Augmentation:
- Manufactured in titanium alloy
- Individual posterior and distal augmentation blocks are available in 6mm and 10mm thicknesses for patients with bone loss

Tibial Augmentation Blocks:
- Manufactured in titanium alloy
- Medial / lateral augmentation spacers mechanically attached to the tibial tray to help restore the joint line and make up for the bone defect
- Available in 5mm, 10mm and 15mm blocks

High Dislocation Height:
- 27.5mm tall
- Provides up to 21mm of dislocation resistance at 90° flexion

STANMORE® Hinge Knee Design Features

Implant:
- Manufactured in cast cobalt chromium alloy

Stability:
- A mechanical stop at 2° hyper-extension makes the joint stable and self-locking when carrying full load

Stem Angle:
- 8° valgus

Femoral Plateau Plate:
- Manufactured in titanium alloy
  - Small
  - Medium
  - Large
  - Extra Large

Bushes:
- Manufactured from ArCom® polyethylene

Axle:
- Retained by a titanium 318 stainless steel circlip

Tibial Plateau Plate:
- Manufactured in titanium alloy
  - Small
  - Medium
  - Large
  - Extra Large

Stem Length:
- Both femoral and tibial stems are 150mm

RHK® Design Features

Femoral Augmentation:
- Manufactured in titanium alloy
- Available in 10mm, 20mm and 30mm thicknesses for significant bone loss

Articulation:
- Both the femur and bearing have large contact areas, with a range of motion up to 155° of flexion

Direct Compression Moulded ArCom® Polyethylene:
- Provides proven wear resistance

Tibial Component:
- Manufactured in cast cobalt chromium alloy
- Five modular tray sizes (63, 67, 71, 75 and 79mm)
- Three cemented monoblock tray sizes (63, 67 and 71mm)

Tibial Augmentation Blocks:
- Manufactured in titanium alloy
- Available in 10mm and 15mm straight sided blocks (anatomical medial/lateral)
- Available in 20mm conical blocks
- Augmentation blocks mechanically attached to the tibial tray to help restore the joint line and make up defects

Splined Titanium Alloy Extensions:
- Designed for cementless use
- Universal for both femoral and tibial components
- Stems of 16mm diameter and above have a coronal split in the distal tip to reduce stiffness and the possibility of thigh pain
- 80mm long (dia. 10mm to 24mm in 2mm increments)
- 120mm long (dia. 12mm to 22mm in 2mm increments)
- 160mm long with anterior bow (dia. 12mm to 22mm in 2mm increments) – (optional)

Titanium Alloy Extensions:
- Designed for cemented use
- Universal for both femoral and tibial components
- 80mm long (dia. 10mm to 16mm in 2mm increments)
- 120mm long (dia. 10mm to 16mm in 2mm increments)

Left and Right Femoral Components:
- Manufactured in cast cobalt chromium alloy
- Anatomical design incorporates a deep patellar groove
- Two sizes: small and standard with full size interchangeability with any of the tibial components

Centralising Bi-Helical Tibial Tray Bearing Interface:
- Mimics the "screw home" mechanism by centralising under body weight
- Provides the patient with an increased degree of confidence in the stability of their knee replacement

Yoke:
- Short yoke for 12, 14 and 16mm bearings
- Long yoke for 18 and 20mm bearings

Fins:
- The anti-rotation fins have been designed to minimise the risk of cortical impingement in smaller tibia, maintaining high stability in the cortical shell

Tibial Bearing Sizes:
- Both sizes available in 12 to 20mm thickness in 2mm increments

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- The anti-rotation fins have been designed to minimise the risk of cortical impingement in smaller tibia, maintaining high stability in the cortical shell

Tibial Bearing Sizes:
- Both sizes available in 12 to 20mm thickness in 2mm increments

OSS Design Features

Modularity:
- The OSS offers increased modularity thanks to a Universal Morse type taper that fits with multiple stems and segments
- Individual components can be combined giving the surgeon more options

Segmental Construct:
- Femoral component, diaphyseal segment and stem for increased modularity

Resurfacing Construct:
- Femoral component and stem

Distal Femoral Component:
- Manufactured in cast cobalt chromium alloy
- 7 cm elliptical (L/R) segmental
- 7 cm (L/R) segmental
- 3 cm and 5 cm (L/R) resurfacing

Modular Tibial Baseplate:
- Manufactured in cast cobalt chromium alloy
- 67, 71, 75, 79 and 83 mm in the M/L plane
- 79 mm “boss” stem length

9 cm Modular Proximal Tibial Component:
- Manufactured in titanium alloy
- May be coupled with any of the diaphyseal segments
- Any of the OSS I/M stems may be used with these configurations
- The 150 mm straight I/M stems may provide the most consistent fit

Non-Modular Proximal Tibial Component:
- Manufactured in titanium alloy
- 3 cm with dia. 11 mm x 240 mm stem
- 5 cm with dia. 9, 11, 13 and 15 mm x 150 mm stem
- 7 cm with dia. 9, 11, 13 and 15 mm x 150 mm stem

Stem Extensions:
- Manufactured in titanium alloy
- 90 mm cemented straight (dia. 9, 10, 11, 12, 13, 15 and 17 mm)
- 90 mm porous straight (dia. 10.5 to 19.5 mm in 1 mm increments)
- 150 mm cemented straight (dia. 9, 11, 13 and 15 mm)
- 150 mm porous straight (dia. 10.5 to 16.5 mm in 2 mm increments)
- 150 mm cemented bowed (dia. 11 to 18 mm in 1 mm increments)
- 150 mm porous bowed (dia. 12.5 to 22.5 mm in 1 mm increments)
- 225 mm and 300 mm cemented bowed (dia. 11 to 17 mm in 2 mm increments)
- 225 mm and 300 mm porous bowed (dia. 12.5 to 18.5 mm in 2 mm increments)

Tibial Bearing:
- ArCom®
- One size (12 to 22 mm thickness in 2 mm increments)

Non-Modular Tibial Baseplate - Short:
- Manufactured in cast cobalt chromium alloy
- 63, 67 and 71 mm in the M/L plane
- 65 mm “boss” stem length
- Tibial augmentation not recommended

Non-Modular Tibial Baseplate - Long:
- Manufactured in cast cobalt chromium alloy
- 63 and 67 mm in the M/L plane
- 160 mm x 10 mm stem
- Tibial sleeve and block augments can be used

Modular Proximal Femoral Component:
- Manufactured in cast cobalt chromium alloy
- Finn 7 cm (L/R)
- Letson 7 cm (L/R)

Diaphyseal Segments:
- Manufactured in titanium alloy
- 3 to 23 cm in 2 cm increments
- 3 cm elliptical
- 4 cm

Total Femur Diaphyseal Coupler:
- Manufactured in titanium alloy
- 10 cm and 30 cm in length

Femoral/Tibial Augmentation:
- Manufactured in titanium alloy
- Resurfacing femoral anterior flange augment
- Resurfacing femoral sleeve augment
- 10 mm tibial block augment universal
- 20 mm side specific tibial block augment
- Small tibial sleeve augment
- Large tibial sleeve augment
**Compress® Design Features**

**Design rationale**

- The Compress® System is the only device that directly links, biologically, a metallic implant to the end of the bone. It is truly a revolution in orthopaedic implant technology.

- The Compress® allows the surgeon to maintain the patient’s own bone stock when faced with major revision bone surgery.

- The Compress® solves the problem of aseptic loosening of stemmed megaprostheses.

- The Compress® offers a fixation alternative over cemented stems in patients undergoing limb sparing surgery.

**Modular Proximal Femoral Component (7cm):**
- Manufactured in cast cobalt chromium alloy

**OSS/Compress® Taper Adapter (5cm):**
- Manufactured in cast cobalt chromium alloy

**Compress® Spindle (1cm):**
- Manufactured in cast cobalt chromium alloy
- 2 spindles Small & Large available in 400, 600 & 800lb depending on cortical bone thickness
- HA coating

**OSS Segmental Distal Femur (7 cm):**
- Manufactured in cast cobalt chromium alloy

**Transverse Pin:**
- Manufactured in cast cobalt chromium alloy
- 11 sizes, 20mm to 60mm

**OSS/Compress® Segmental Distal Femur (7 cm):**
- Manufactured in cast cobalt chromium alloy

**Min 13 cm Replacement:**
- Possibility to add on the OSS Diaphyseal Segments for larger bone reconstruction

- Also available for proximal tibial replacement

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1. Compress Brochure, Form No. Y-BMT-930/081505/M