Vanguard® 360 Revision Knee System
Over 1 million times per year, Biomet helps one surgeon provide personalized care to one patient.

The science and art of medical care is to provide the right solution for each individual patient. This requires clinical mastery, a human connection between the surgeon and the patient, and the right tools for each situation.

At Biomet, we strive to view our work through the eyes of one surgeon and one patient. We treat every solution we provide as if it's meant for a family member.

Our approach to innovation creates real solutions that assist each surgeon in the delivery of durable personalized care to each patient, whether that solution requires a minimally invasive surgical technique, advanced biomaterials or a patient-matched implant.

When one surgeon connects with one patient to provide personalized care, the promise of medicine is fulfilled.
The Vanguard® 360 Revision Knee System delivers customizable implant combinations due to independent fit of each component and comprehensive instrumentation to aid surgeons in addressing diverse, often challenging procedures while choosing a personalized patient approach to revision knee surgery.
The Vanguard® 360 Revision Knee System incorporates key Vanguard® Complete Knee Systems femoral design features including ten femoral sizes and complete tibial/femoral interchangeability for an individualized patient fit.

The Vanguard® 360 femoral component accepts a variety of stem options and offset adapters allowing for precise component positioning.
Femoral Component

Sizes increase on average by 2.4 mm anterior/posterior and 2.6 mm medial/lateral for all ten sizes.

Stem Extensions

Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.
1. **Femoral Component**
   Sizes increase on average by 2.4 mm anterior/posterior and 2.6 mm medial/lateral for all ten sizes.

2. **Offset Stem Adapter**
   Available in 2.5, 5 and 7.5 mm offset magnitudes, the offset stem adapter rotates 360 degrees for precise positioning and is universal to both the femoral and tibial components.

3. **Stem Extensions**
   Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.
Flexibility

The Vanguard® 360 Revision Knee System offers ultimate intraoperative flexibility by providing independent sizing of femoral and tibial components and the capability to position universal femoral and tibial stem offsets in a full 360 degree range. This flexibility provides options to effectively address bone loss, all of which provide personalized patient care.

1. Stem Extensions
   Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.

2. Offset Stem Adapter
   Available in 2.5, 5 and 7.5 mm offset magnitudes, the offset stem adapter rotates 360 degrees for precise positioning and is universal to both the femoral and tibial components.

3. Femoral Component
   Sizes increase on average by 2.4 mm anterior/posterior and 2.6 mm medial/lateral for all ten sizes.

4. Independent Distal and Posterior Augments
   Individual distal (available in 5, 10 and 15 mm thicknesses) and posterior (available in 5 and 10 mm thicknesses) femoral augments provide a solution to address bone loss.
Vanguard® 360 Revision Knee System

Tibial Construct

The Vanguard® 360 Revision Knee System tibial design incorporates nine sizes and the same symmetrical shape from the Vanguard® Complete Knee System as well as the clinically proven polyethylene bearing locking mechanism.¹

The Vanguard® 360 tibial component accepts a variety of stem options and offset adapters allowing for precise component positioning.
1. **Bearing**
   - 360 PS Bearing: Deeper anterior cutout, 15 degrees internal/external rotation, no varus/valgus constraint
   - ArCom® Polyethylene is clinically proven to be resistant to wear, delamination and oxidation
   - Provides deep anterior relief to accommodate the patella tendon during high flexion

2. **Tray**
   - Symmetrical tibial tray design available in nine sizes for optimal tibial coverage
   - Compressive Locking Mechanism is clinically proven to minimize micromotion and backside wear

3. **Stem Extensions**
   Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation
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Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.

Tray
- Symmetrical tibial tray design available in nine sizes for optimal tibial coverage
- Compressive Locking Mechanism is clinically proven to minimize micromotion and backside wear

Bearing
- 360 PS Constrained (PSC) Bearing: Deeper anterior cutout, 0.5 degrees internal/external rotation, 1 degree varus/valgus constraint
- ArCom® Polyethylene is clinically proven to be resistant to wear, delamination and oxidation
- Provides deep anterior relief to accommodate the patella tendon during high flexion

Stem Extensions
Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.
1. **Bearing**
   - 360 PS Constrained (PSC) Bearing: Deeper anterior cutout, 0.5 degrees internal/external rotation, 1 degree varus/valgus constraint
   - ArCom® Polyethylene is clinically proven to be resistant to wear, delamination and oxidation
   - Provides deep anterior relief to accommodate the patella tendon during high flexion

2. **Tray**
   - Symmetrical tibial tray design available in nine sizes for optimal tibial coverage
   - Compressive Locking Mechanism is clinically proven to minimize micromotion and backside wear

3. **Offset Stem Adapter**
   Available in 2.5, 5 and 7.5 mm offset magnitudes, the offset stem adapter rotates 360 degrees for precise positioning and is universal to both the femoral and tibial components

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   - Available in 2.5, 5 and 7.5 mm offset magnitudes, the offset stem adapter rotates 360 degrees for precise positioning and is universal to both the femoral and tibial components.

3. **Tray**
   - Symmetrical tibial tray design available in nine sizes for optimal tibial coverage.
   - Compressive Locking Mechanism is clinically proven to minimize micromotion and backside wear.

4. **Bearing**
   - 360 PS Constrained (PSC) Bearing: Deeper anterior cutout, 0.5 degrees internal/external rotation, 1 degree varus/valgus constraint.
   - ArCom® Polyethylene is clinically proven to be resistant to wear, delamination and oxidation.
   - Provides deep anterior relief to accommodate the patella tendon during high flexion.

5. **Cruciate Wing Augment**
   - Modular small and large cruciate wing augments provide extra rotational stability and can be used with block augments, offset stem adapters and all stem options.

6. **Stem Extensions**
   - Smooth, grit-blasted and splined stems are available in 40, 80, 120, 160 and 200 mm lengths and a wide range of diameters to provide for component fixation.
The Vanguard® 360 Revision Knee System offers the most constrained, non-hinged bearing in the industry, providing optimal stability for patients with ligament deficiencies.

Stability

1. Bearing
   - 360 PS Constrained (PSC) Bearing: Deeper anterior cutout, 0.5 degrees internal/external rotation, 1 degree varus/valgus constraint
   - ArCom® Polyethylene is clinically proven to be resistant to wear, delamination and oxidation
   - Provides deep anterior relief to accommodate the patella tendon during high flexion

2. Tray
   - Symmetrical tibial tray design available in nine sizes for optimal tibial coverage
   - Compressive Locking Mechanism is clinically proven to minimize micromotion and backside wear

3. Block Augment
   Available in 5, 10 and 15 mm thicknesses, block augments provide a solution to address bone loss

4. Cruciate Wing Augment
   Modular small and large cruciate wing augments provide extra rotational stability and can be used with block augments, offset stem adapters and all stem options

5. Offset Stem Adapter
   Available in 2.5, 5 and 7.5 mm offset magnitudes, the offset stem adapter rotates 360 degrees for precise positioning and is universal to both the femoral and tibial components

6. Stem Extensions
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Swept Back Tibial Post

Design provides stability and constraint in deep flexion

Increased Post/box Contact
At 90 degrees of flexion, 17mm of the tibial post remains in the box
Vanguard® 360 Revision Knee System

Instrumentation

The Vanguard® 360 Revision Knee System delivers a comprehensive instrumentation platform to accurately size and position implants to the patient. The innovative cut-through femoral trials provide surgeons with the flexibility to choose their preferred surgical approach to maximize efficiency.
Efficiency

Offering a seamless transition from a Vanguard® Primary Knee, the Vanguard® 360 Revision Knee System features precise, intuitive instrumentation to allow surgeons to achieve optimal component position through early trialing, establishing balance and appropriate tension while efficiently addressing unique patient anatomies.

Early trialing technique can help:

- preserve bone by allowing for evaluation of component sizing and position prior to committing to any bone resections
- decrease O.R. time by reducing the amount of instrumentation needed
References


