Vanguard® Tibial Bearings

Vanguard® Tibial Bearings are available in ArCom® Direct Compression Molded (DCM) polyethylene and E1™ Antioxidant Infused Technology. ArCom® polyethylene is clinically proven to be resistant to wear, delamination and oxidation. E1™ Antioxidant Infused Bearings, founded on ArCom® heritage, are infused with vitamin E, a natural antioxidant. E1™ technology defines a new class of tibial bearings and overcomes the limitations of remelted and annealed polyethylene by uniting true oxidative stability, high mechanical strength and ultra low wear.1–5

Volumetric Wear Rates of Largest Posterior Stabilized (PS) Tibial Bearing Profile

<table>
<thead>
<tr>
<th>Volumetric Wear Rate (mm³/MC)</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>ArCom®</td>
</tr>
<tr>
<td>0.06</td>
<td>Direct Compression Molded (DCM)</td>
</tr>
<tr>
<td>0.15</td>
<td>E1™</td>
</tr>
</tbody>
</table>

Posterior Stabilized
• No varus/valgus constraint
• 15° internal/external rotation

Posterior Stabilized Plus
• 2° varus/valgus constraint
• +/- 2° internal/external rotation

References

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Vanguard® Complete Knee System
Posterior Stabilized

Knees • Hips • Extremities • Cement and Accessories • PMI® • Technology
The Vanguard® Complete Knee System provides for personalized patient care by allowing a custom fit of the femoral, tibial and patellar components independently, thus addressing the largest possible percentage of the population.

Deep Trochlear Groove
Reduces patellar forces throughout range of motion

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

Wider Proximal Trochlear
Provides excellent patellar tracking regardless of patient’s Q-angle

Optimized Tibiofemoral Antecipation
Increased contact area in high flexion and axial rotation

Proportional Posterior Condyles
Allows for greater contact area in deep flexion

Softened Anterior Flange
Streamlined design reduces incidence of "retinacular tenting"

Cam Extension
Provides increased resistance to dislocation in deep flexion

Mid Cam and Post Engagement
Provides for optimal dislocation resistance and wear performance

Rounded Sagittal Profile
Reduces soft tissue force in mid-flexion

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

Rounded Sagittal Profile
Reduces soft tissue forces in mid-flexion

Constraint Bearing Options
PS or PS Plus can be utilized with the PS femur

Patellar tendon Relief
Facilitates increased range of motion

Raised Anterior Lip
Provides enhanced femoral rotational stability and controls anterior femoral slide

Patellar Tendon Relief
Facilitates increased range of motion

Tibial Tray Design
Symmetrical tibial tray available in nine sizes for optimal ideal coverage

Constraint Bearing Options
PS or PS Plus can be utilized with the PS femur

Rotated Bearing Surface Articulation
Increased contact area by 15 percent

Biomet® Tibial Tray
The Vanguard® Complete Knee System features a symmetrical tibial tray design for optimal coverage. ArCom and E1™ Tibial Bearings for proven wear resistance and a proven locking mechanism shown to be "the most stable overall."™ Biomet® tibial trays are available with Interlok® finish for cemented applications or Regenerex® Porous Titanium Construct to enhance bone fixation in cementless applications.

Raised Anterior Lip
Provides enhanced femoral rotational stability and controls anterior femoral slide

Patellar tendon Relief
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Tibial Tray Design
Symmetrical tibial tray available in nine sizes for optimal ideal coverage

Proven Compressive Locking Mechanism
Clinically proven to minimize micromotion and backside wear

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Vanguard® Complete Knee System

Additional Features of the Vanguard® PS Design:
- 10 femoral components that grow anterior/posterior on average by 2.4 mm increments
- 1:1 Tibiofemoral coronal congruency
- PPS® Plasma Plasma Spray coating for cementless or Interlok® finish for cemented applications
- Available in open and closed box designs

Vanguard® PS Femoral Component shown with E1™ Tibial Bearing and Cruciate Retinacular Tibial Tray

*within 0–15° of Q-angle

Proven Compressive Locking Mechanism
Clinically proven to minimize micromotion and backside wear

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