OPTETRAK®

A COMPREHENSIVE KNEE SYSTEM

RBK®

ROTATING BEARING KNEE

The Right Track

It's not just a road we're on,
it's a trail we're blazing.

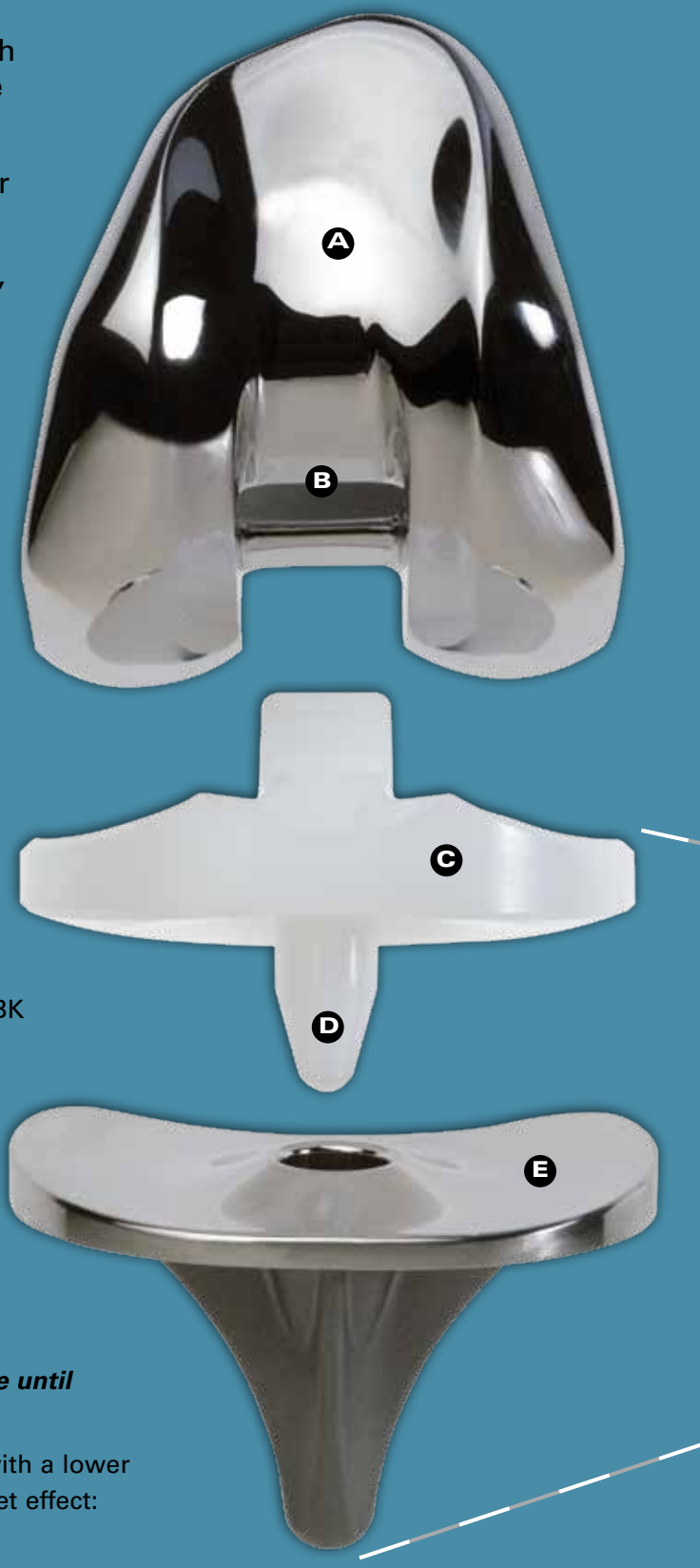
Exactech®

Optetrak®... The Right Track.

The Optetrak® RBK® gives you the best of both worlds — the benefits of a fixed and a mobile bearing knee in one unique system.

The fixed, proximal-bearing surface allows for 145 degrees of flexion while maintaining Optetrak's proven optimized congruency. The lower bearing features a patented "wave" design for rotational freedom and predictable kinematics.

These two articulating surfaces work together to maintain proper alignment and minimize contact stress.



Optetrak...The Right Track

Optimized congruency, excellent patellar tracking and low contact stress are hallmarks of the Optetrak comprehensive knee system. The Optetrak RBK upper bearing surface features the same, proven features of the primary Optetrak design. By closely matching femoral and tibial geometries, Optetrak achieves frontal congruency of 0.96:1 — a ratio proven to reduce contact stress and improve polyethylene wear in in vitro knee simulator wear studies.[1]

Featuring the Optetrak Hi-Flex® posterior stabilized femoral component and tibial insert designs, Optetrak RBK maintains congruent articulation through high flexion.

The Wave of the Future is Here

The contact surface between the tibial insert and tibial tray features a patented "wave" design. This shape shields the central, polyethylene peg from loading to reduce wear and breakage. It also allows for optimized tibial insert thickness.

Optetrak RBK articulates with the upper bearing surface until high demand rotation activates the lower bearing.

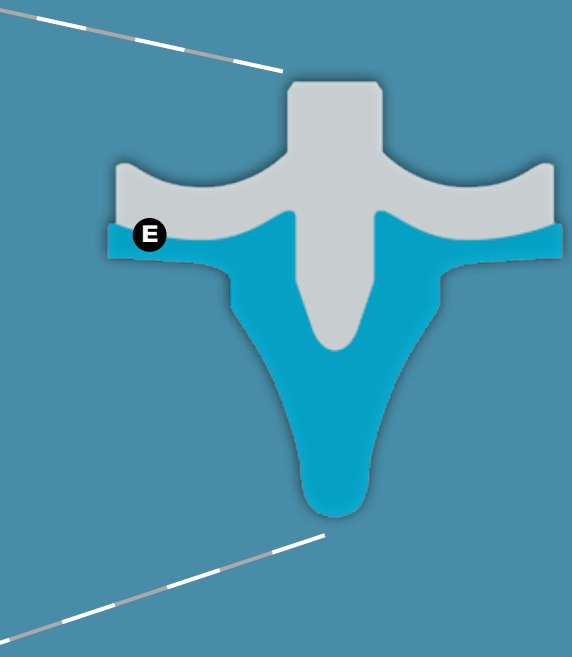
Excellent congruency of the upper bearing is coupled with a lower bearing that is not forced to unnecessarily rotate. The net effect: less in vitro polyethylene wear debris.[2]

A Optetrak's contoured femoral flange, the smooth shape in the sagittal plane and a deep femoral groove reduce strain in the retinacular tissue, allowing for more natural patellar tracking from extension to flexion.[3,4,5]

B The Hi-Flex spine and cam mechanism, combined with the tibial insert's upper geometry, provide controlled rollback for up to 145 degrees of flexion without posterior impingement.

C Optetrak's tibial inserts are net compression molded polyethylene. No machining is performed on the upper bearing surface. *In vitro* studies have shown that compression molded tibial inserts have less debris and less pitting than machined tibial inserts.[1,6]

D The central polyethylene peg is used only as an anti-luxation device, not as a pivot guide for the axial rotation. This allows the peg size to be reduced to provide for easier implantation and a bone-preserving, primary fin preparation.



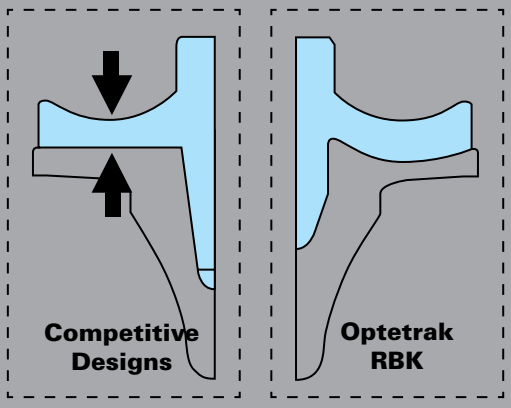
E The wave geometry provides a predictable contact surface between the components, especially during the eccentric loading position.

Solid Fixation[7,8]

Optetrak RBK offers options for cemented and press-fit fixation. The porous-coated tibial component allows the maximum surface area for bone ingrowth. Specialized porous trial fins prepare the bone for proper press fit into the tibia. The RBK porous trays may be upsized or downsized as needed to provide optimized tibial coverage while maintaining femoral and insert congruency.

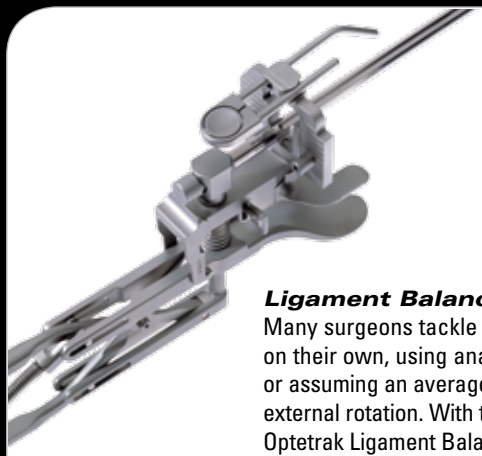
Predictable Kinematics

Optimized condylar contact is maintained throughout high flexion with +/- 8 degrees of rotation for the posterior portion of the insert, regardless of tibial tray size.



Maximized Polyethylene Thickness

Polyethylene thickness is maximized (+25% for a 9mm composite) and constant throughout the contact surface, unlike designs that reduce thickness where load is the greatest.



Ligament Balancing System
Many surgeons tackle ligament balancing on their own, using anatomic landmarks or assuming an average three degrees of external rotation. With the patented Optetrak Ligament Balancing System, the patient's soft tissue determines the ideal external rotation of the femoral component, taking ligament balancing from a guess to a science.

Streamlined Instrumentation

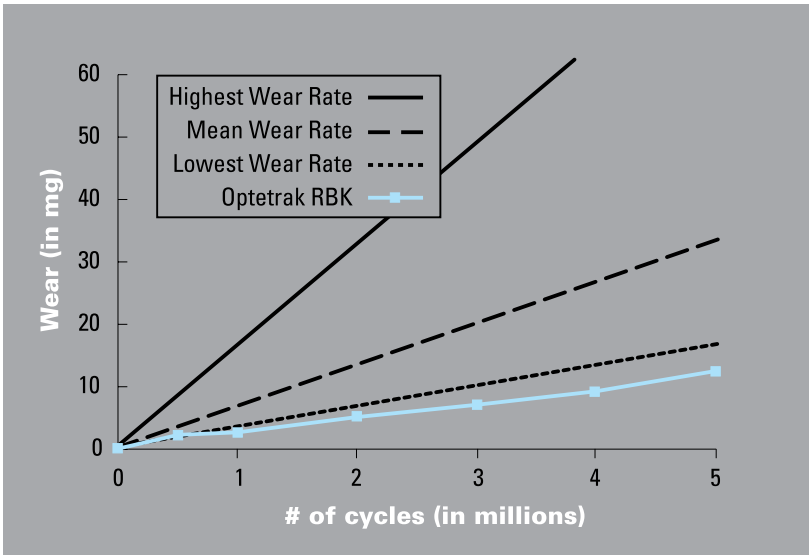
Optetrak RBK uses the streamlined Optetrak instrumentation, including the Ligament Balancing System critical to proper function in a rotating bearing design. Along with the standard Optetrak set, additional trials and a tibial punch are provided for the RBK system.

RBK can be easily converted intra-operatively to a fixed bearing knee without the need for additional cuts before final implantation.

In vitro testing at an independent laboratory demonstrated Optetrak RBK's low wear.[2,9,10]

- Test showing more than one degree of rotational motion between the femoral component and the tibial tray during stance phase
- Results are based on wear tests performed on Optetrak RBK and nine competitive rotating knees, according to ISO 14243
- With the permission of Endolab GmbH.

Optetrak RBK Hi-Flex vs. Competitors



NOT AVAILABLE FOR SALE IN THE UNITED STATES

References

1. **Furman BD, Lai S, Stephen Li S.** A Comparison of Knee Simulator Wear Rates Between Directly Molded and Extruded UHMWPE. Presented at Society for Biomaterials, 2001.
2. Data on file at Endolab GmbH.
3. **Petty RW.** Caveats in patello-femoral design. Presented at the Tenth Annual Meeting, Current Concepts in Joint Replacement, Orlando, FL 1994.
4. **Robinson, RP.** Comparison of clinical results of the third, fourth and fifth generations of the Hospital for Special Surgery prosthetic knee implant. Presented at the Pennsylvania Orthopaedic Society, Fall 1999, Farmington, PA.
5. **Sculco TP.** The significance of patellar clunk: how loud the sound! Presented at Current Concepts in Joint Replacement, Winter 1999.
6. **Benson LC, DesJardins JD, LaBerge M.** Effects of in vitro wear of machined and molded UHMWPE tibial inserts on TKR kinematics. *J Biomed Mater Res,* 2001 July; 58(5): 496-504.
7. **Tarkin, I.S., Bridgeman, J.T., Jardon, O.M., and Garvin, K.L.** Successful Biologic Fixation with Mobile-Bearing Total Knee Arthroplasty. J Arthroplasty. 2005; 20 (4); 481-486
8. **Buechel, F.F.** Long-term Followup After Mobile-Bearing Total Knee Replacement. CORR. 2002. 404; 40-50
9. **Angibaud L, Burstein A, Balcom W, Miller G.** Wear Advantage of novel Rotating Bearing Knee – An In-Vitro Study, Podium presentation ISTA 2006
10. **Angibaud L, Burstein A, Balcom W, Miller G.** Wear Advantage of novel Rotating Bearing Knee – An In-Vitro Study, Poster presentation ORS 2007. San-Diego, USA. February 11-14, 2007

Patent WO 2005/009298 and other patents pending

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