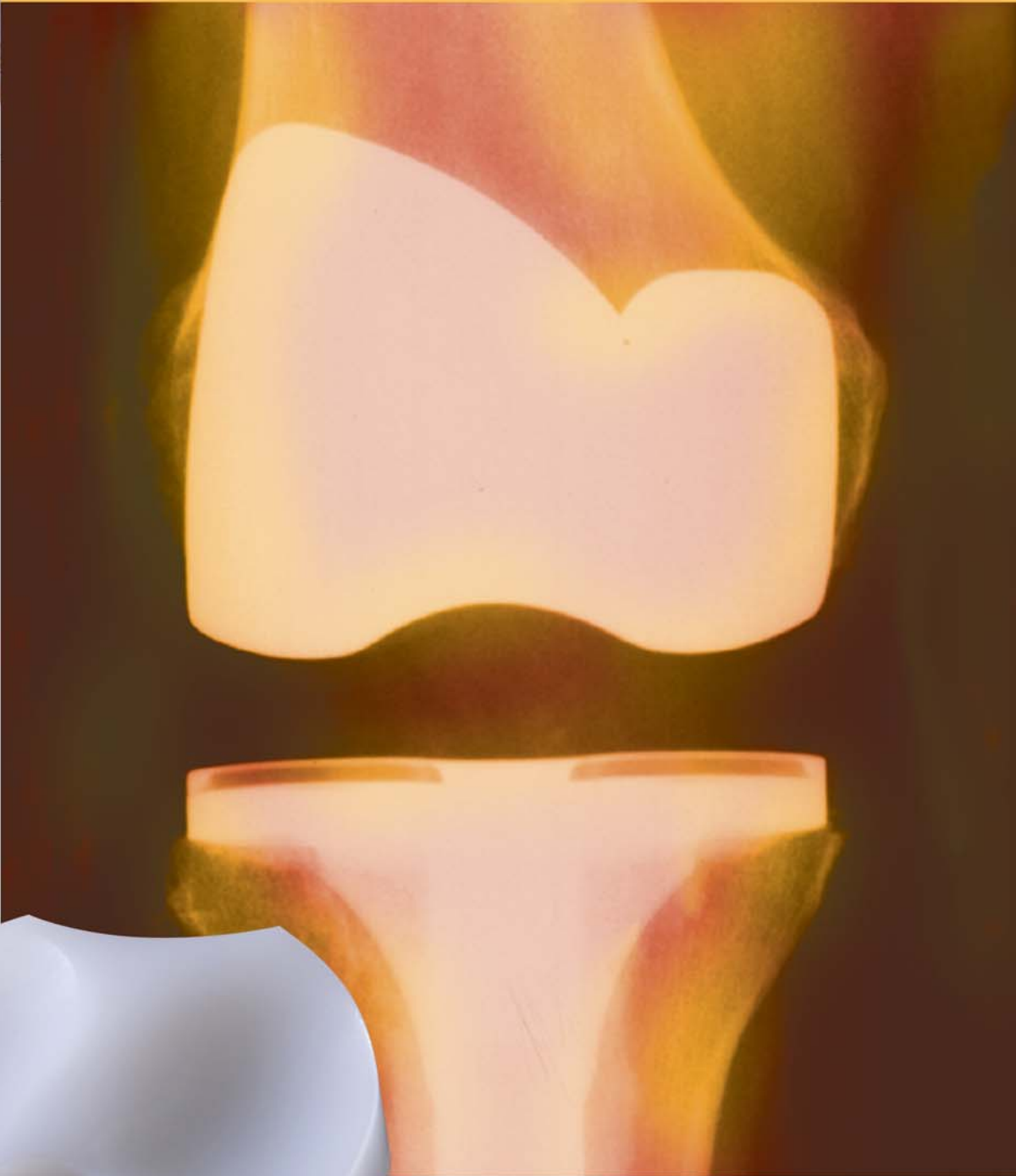


KNEE SYSTEM solutions

ADVANCE[®]

DOUBLE-HIGH KNEE



HIGH STABILITY.
HIGH FLEXIBILITY.*

WRIGHT.
TM

ADVANCE®

DOUBLE-HIGH KNEE

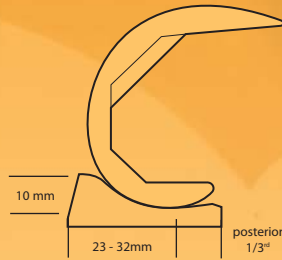


FIGURE 1 | ADVANCE® Double-High Insert and Femoral Component

RAISED ANTERIOR LIP

- Reduces anterior sliding (paradoxical motion) by maintaining the femur within the posterior 1/3rd of the tibial insert^{2,3,4}
- Increases range of motion by avoiding impingement in flexion and lengthening the quadriceps lever arm^{5,6}
- Enhances anterior/posterior stability
- May share anterior stresses placed upon the posterior cruciate ligament (PCL)
 - Theoretically allows longer, more effective PCL function
 - May inhibit PCL loosening (a common complication among cruciate retaining knees)^{7,8,9}
 - May substitute for the PCL in the event of rupture

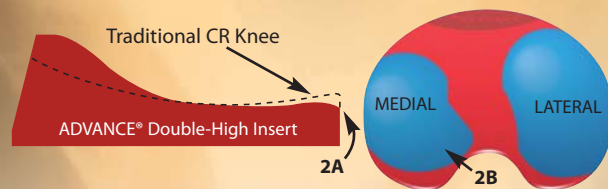


FIGURE 2 | ADVANCE® Double-High Insert Surface

PCL-GUIDED FLEXION PATH

- Designed to allow the PCL-dictated posterior translation and rotation demonstrated in current deep flexion studies^{10,11}
- MEDIAL SIDE - Features low-profile posterior rim **2A** and lateral relief **2B** to prevent interference as the PCL guides the femur in flexion¹¹
- LATERAL SIDE - Anatomic path allows the anterior/posterior translation found in the normal knee

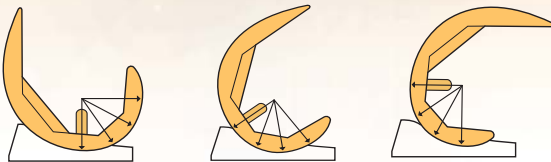
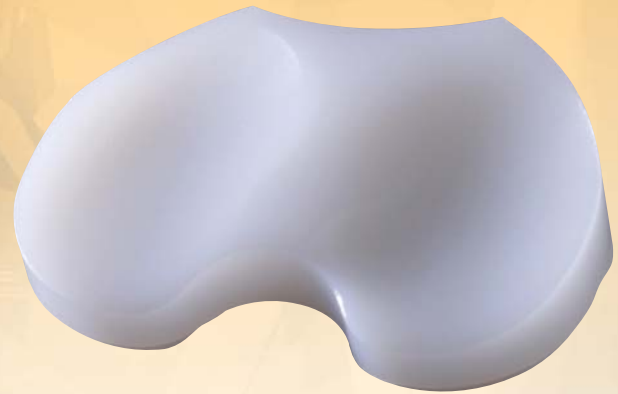


FIGURE 3 | Constant Radius of ADVANCE® Double-High Knee

FEMORAL COMPONENT WITH CONSTANT RADIUS

- Maintains equal tension on ligaments in flexion and extension and eases balancing the PCL
- Allows constant contact area throughout ROM
- Creates an anatomic patella track

The ADVANCE® Double-High Knee represents the beginning of the modern age in cruciate retaining knees. To manage more dynamic function, the ADVANCE® Double-High Knee articular surface features a clinically proven, raised anterior lip and PCL-guided flexion path which work in conjunction to provide anterior stability and allow deep natural flexion. Furthermore, the ADVANCE® Double-High Knee incorporates a femoral component with an anatomic constant radius that avoids the decreasing contact areas associated with standard j-curved femoral components¹.



REFERENCES

1. KUSTER MS, et al. Factors affecting polyethylene wear in total knee arthroplasty. *Orthopedics* Feb;25(2 Suppl):s235-242. 2002
2. LOTKE PA. The posterior cruciate ligament in total knee arthroplasty: a commentary. *University of Pennsylvania Orthopaedic Journal*. Vol 12:109.1999
3. BLAHA JD, et al. In vivo determination of kinematics for subjects having either an anterior cruciate ligament retaining or medial pivot total knee arthroplasty. Scientific Exhibit AAOS. 2002
4. SCHMIDT R, BLAHA JD, PENENBERG BL, MALONEY WJ, KOMISTEK RD. Fluoroscopic analyses of cruciate retaining and medial pivot knee implants. *Clin Orthop* 410:139-147. 2003
5. BELLEMANS J, et al. Fluoroscopic analysis of the kinematics of deep flexion in total knee arthroplasty. *JBJS (Br)*; 84-B:50-3. 2002
6. MAHONEY OM, et al. The effect of total knee arthroplasty design on extensor mechanism function. *J Arthroplasty* 17(4):416-21. 2002
7. Mahoney OM, Noble PC, Rhoads DD, Alexander JW and Tullos HS. Posterior cruciate function following total knee arthroplasty: A biomechanical study. *J Arthroplasty*, 9:569-78. 1994
8. LASKIN R, O'FLYNN H. Total knee replacement with posterior cruciate ligament retention in rheumatoid arthritis. *Clin Orthop* 345:24-28. 1997
9. NELSON CL. Total knee arthroplasty with preservation of the posterior cruciate ligament. *University of Pennsylvania Orthopaedic Journal*. Vol 12:96-99.1999
10. KOMISTEK RD, et al. In vivo fluoroscopic analyses of the normal human knee. *Clin Orthop* 410:69-81. 2003
11. KUROSAKA M, et al. Maximizing flexion after total knee arthroplasty. The needs and the pitfalls. *J Arthroplasty* 17(4) suppl 1. 2002

* Wright Medical Technology Engineering Reports ER03-0080 and ER03-0081



Wright Medical Technology, Inc.
5677 Airline Road
Arlington, TN 38002
901.867.9971 phone
800.238.7188 toll-free
www.wmt.com

Wright Cremascoli Ortho SA
Zone Industrielle la Farlecle
Rue Pasteur BP 222
83089 Toulon Cedex 09
France
011.33.49.408.7788 phone

*Registered mark of Wright Medical Technology, Inc.
ADVANCE® is a registered trademark of Wright Medical Technology, Inc.
ADVANCE® is covered by one or more of the following patents:
U.S. Patents: 4,298,992; 4,718,413; 5,219,362; 5,662,656; 5,672,178; 5,702,458; 6,013,103
©2004 Wright Medical Technology, Inc. All Rights Reserved.

MK 280-1103 (Rev. 104)