

TOTAL KNEE SYSTEM

WHEN INNOVATION AND INTUITION ALIGN.



LOGIC

A Well-Rounded Solution.

Exactech has made history with our highly evolved Optetrak[®] comprehensive knee system—a system that has three decades of clinical success and proven outcomes for patients around the world.^{1,2} We've made history, and the future is clear.

Exactech is proud to introduce Optetrak Logic[®], the next evolution of the Optetrak knee system. And like its name indicates, this approach to total knee arthroplasty just makes sense. From a simplified, bone-preserving technique to efficient, tissue-sparing instrumentation, Optetrak Logic is designed to meet the demands of today's more active patients while adding to the efficiency of your operating room.

Optetrak Logic is an advanced approach to total knee replacement that introduces modern design features and intuitive instrumentation while building on the wisdom of a strong design lineage.

Think Outside the Box

Optetrak Logic PS features a unique cylindrical bone resection that simplifies notch preparation and minimizes bone loss. The singlestep notch resection has been shown to remove 30 percent less bone compared to traditional box resections and eliminate the potential for undercutting the femoral condyles.³ This approach is easier, faster and more consistent than a traditional box cut. Rather than having a single-sized notch resection, Optetrak Logic optimizes the notch by changing proportionally with each femoral component size (*Figure 1*).

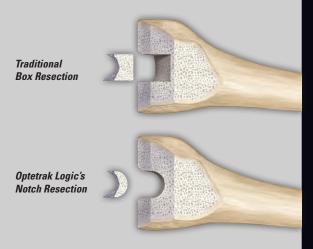


Figure 1

Optetrak Logic removes 30 percent less bone compared to traditional box resections and eliminates the potential for undercutting the femoral condyles.³

LOGIC[®]

The Art of Motion.

With its patented Hi-Flex[®] femoral, tibial insert and patellar design, Optetrak Logic allows today's active patients the range of motion and patellar function they need to maintain their activity and independence. Optimized congruencies between the femoral and tibial components reduce contact stress and improve polyethylene wear.¹

Taking Flexion to a New Level

Optetrak Logic's PS spine/cam mechanism and optimized load-bearing tibial insert geometry are designed to allow patients to achieve their **maximum flexion potential without posterior impingement** (*Figure 1*). This increased range of motion can be achieved without resecting more posterior bone than what is required for a standard knee. The Hi-Flex[®] design maintains excellent congruency, contact pressure and dislocation resistance, delivering the performance that demanding patients expect.

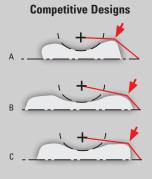
Let Nature Take Its Course

Optetrak Logic offers a **complete range of sizing options** that conform to varying patient anatomy. The femoral component aspect ratio is designed to accommodate diverse femoral morphologies without overhang and subsequent soft tissue irritation or alterations in the knee biomechanics.

The wide femoral groove and patented spherical, all polyethylene patellar design allows your patient's patella to **track naturally during flexion and extension**. This design feature has proven successful in significantly reducing lateral retinacular release rates and the incidence of peripatellar fibrosis^{2,5,6} (*Figure 2*).



Hi-Flex spine/cam interaction provides controlled rollback and dislocation resistance at 145 degrees of flexion.



Optetrak Logic

Optetrak Logic reduces strain on the retinaculum and allows natural patella tracking.

Figure 2

OPTETRAK LOGIC®

A Material Difference.

Δ

Through the careful blending of design and materials, Optetrak Logic provides ultimate flexibility and reliability. Optetrak Logic's tibial performance benefits from net compression molded polyethylene, optimized congruencies and a tight locking mechanism

Net Molded, Not Machined

Optetrak Logic's unique net compression molded polyethylene inserts produce a smooth articular surface free from machining lines. This plus optimized congruencies between the femoral component and tibial insert, results in low contact stresses, less wear debris and less pitting.7 Sterilized with gamma radiation in a vacuum, the net compression molded polyethylene inserts are appropriately cross linked and retain all mechanical properties of yield strength, fatigue strength and fracture resistance while avoiding the generation of free radicals that lead to oxidation.8

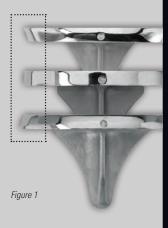
Locked in Tight

Backside wear threatens the function and longevity of total knee replacements. Optetrak Logic's tibial components feature a clinically successful, rock-solid locking mechanism that consist of three design elements: a continuous peripheral rim around the tray, precision undercuts in the tray and a central mushroom. These design elements prevent component disassociation, provide a barrier to insert motion and minimize polyethylene debris.9-11

Optetrak Logic maintains optimal congruencies between the femur and polyethylene inserts by matching the insert size to the femoral component size. With the fixed insert size, Optetrak Logic offers up- and down-sized tibial trays to optimize proximal tibia coverage (Figure 1).

Optetrak Logic's Proximal Tibial Spacer (PTS), provides the option to expand the tibial construct to accommodate larger flexion-extension gaps.

Tibial Up- and Down-Sizing



LOGIC

Instrumental to Success.

6

Optetrak Logic's Low Profile Instrumentation (LPI®) provides a new level of efficiency for your operating room. This optimized system of user-friendly instruments features an innovative approach to notch preparation and a modular case layout that streamlines your operating room workflow.

Simplicity without Compromise

Optetrak Logic's LPI is designed to achieve reproducible bone preparation and limb alignment regardless of the size of the incision or method of handling soft tissues. The system's easy-to-use instrumentation allows you to work quickly and efficiently with **sleek solutions** for your preferred surgical technique.

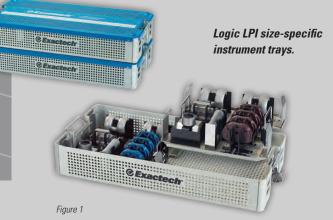
A Notch Above the Rest

Optetrak Logic features a unique single-step notch resection that not only preserves bone, but it is **simpler, faster and more consistent** than the traditional approach.¹² The cutting guide allows accurate medial-lateral placement of the notch enabling you to visualize the position of the implant before making the cut. The re-usable cylindrical cutting tool eliminates the potential for undercutting the femoral condyles.

The Case for Efficiency

Optetrak Logic's innovative instrument layout and modular case design improves your operating room workflow, organizing the instruments with your technique in mind while reducing the number of required instruments (*Figure 1*). Trials and other instruments are grouped by size in modular half trays, enabling you to customize your instruments for a specific patient. This not only **improves your operating room efficiency**, but the reduction in instrument inventory also reduces other instrument handling costs.

7



OPTETRAK LOGIC®

The Future is Clear.

8

As a company founded by an orthopedic surgeon and a biomedical engineer, Exactech has a unique perspective on product development. Our orthopaedic implants, surgical instrumentation and biologic solutions are designed with the primary goal of improving patient outcomes.

Choose with Confidence

The foundation of Optetrak Logic started more than 30 years ago with a concept developed at Hospital for Special Surgery in New York and has been evolving and improving ever since. The design is **based on the solid foundation of the Total Condylar, Insall/Burstein, Insall/Burstein II** and the original Optetrak knees, which have demonstrated excellent long-term clinical results.¹³⁻²⁰

Improve Patient Outcomes

We are committed to enhancing your overall Exactech Experience with value-added programs that **address the latest emerging trends in total joint arthroplasty** and improve clinical outcomes. Your patients can experience a custom-fit knee and faster recovery time with two of Exactech's most recent innovations – Exactech GPS[®] (*Figure 1*) and Accelerated Recovery Technique (ART[®]).

Exactech GPS – guided, personalized surgery – is a powerful addition to your surgical team that supports your goals of achieving accuracy and reproducibility in total knee arthroplasty. The non-intrusive, computer-based system is designed to provide fast, accurate, visual displays of anatomical landmark verification within the sterile field. Personalized for surgeon preferences and patient indications, the system guides your entire O.R. staff through each case.

Exactech ART is a unique protocol that combines the use of platelet-rich plasma with advanced pain-management treatments, closure techniques and wound management. Designed to reduce blood loss, decrease post-operative pain and speed recovery, the ART protocol is painting a brighter outlook for patients every day.

Figure 1



Exactech GPS – Guided Personalized Surgery



LOGIC[®]

An advanced approach to total knee replacement that introduces modern design features and intuitive instrumentation while building on the wisdom of a strong design lineage.

- A deep, wide femoral groove and contoured femoral flange reduce strain in the retinaculum, allowing for more natural patellar tracking.^{2,5,6}
- B Cylindrical bone resection design simplifies notch preparation and removes less bone compared to traditional box resections.³
- C Hi-Flex[®] design allows maximum flexion potential without posterior impingement.⁴
- D Patented optimized femoral/tibial congruency reduces contact and polyethylene stresses.²
- E Direct compression molded polyethylene minimizes wear and polyethylene debris.⁷
- F Modular tibial components feature a three-part locking mechanism to prevent insert motion and disclocation.⁹⁻¹¹

References

- 1. Robinson RF. Five-year follow-up of primary Optetrak posterior stabilized total knee arthroplasties in osteoarthritis. J Arthroplasty. 2005 Oct;20(7):927-31.
- 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.
- Data of file at Exactech. 051K. Intercondylar Femoral Notch Preparation for Posterior Stabilized Knee Arthroplasty – Volumetric Bone Resection According to Two Methods.
- 4. Data on file at Exactech, Inc.
- Sculco TP. The significance of patellar clunk: how loud the sound! Presented at Current Concepts in Joint Replacement, Winter 1999.
- Petty RW. Caveats in patello-femoral design. Presented at the 10th Annual Meeting, Current Concepts in Joint Replacement, Orlando, FL. 1994.
- Furman BD, Lai S, Li S. A comparison of knee simulator wear rates between directly molded and extruded UHMWPE. Presented at Society for Biomaterials, 2001.
- Li S, Burstein AH. Ultra-high molecular weight polyethylene: the material and its use in joint implants. J Bone Joint Surg Am.1994 Jul;76(7):1080-90.
- Engh GA, Lounici S, Rao AR, Collier MB. In vivo deterioration of tibial baseplate locking mechanisms in contemporary modular total knee components. *J Bone Joint Surg.* 2001;83-A:1660-5.
- Li S, Scuderi G, Furman BD, Bhattacharyya S, Schmieg JJ, Insall JN. Assessment of backside wear from the analysis of 55 retrieved tibial inserts. *Clin Orthop.* 2002;(404):75-82.

- Jayabalan P, Furman B, Cottrell J, Wright T. Backside wear in modern total knee design. HSSJ. 2007;3:30-4.20.
- Ranawat CS, Flynn WF Jr, Saddler S, Hansraj KK, Maynard MJ. Long-term results of the total condylar knee arthroplasty: A 15-year survivorship study. *Clin Orthop.* 1993;286:94-102.
- 13. Gill GS, Joshi AB, Mills DM. Total condylar knee arthroplasty: 16- to 21-year results. *Clin Orthop*. 1999;367:210-5.
- Insall JN, Lachiewicz PF, Burstein AH. The posterior stabilized condylar prosthesis: a modification of the Total Condylar design. Two-to four-year clinical experience. J Bone Joint Surg. 1982;64-A:1317-23.
- 15. **Stern SH, Insall JN.** Posterior stabilized prosthesis: results after follow-up of nine to 12 years. *J Bone Joint Surg.* 1992;74-A(7): 980-6.
- Aglietti P, Buzzi R, De Felice R, Giron F. The Insall/Burstein total knee replacement in osteoarthritis: a 10-year minimum follow-up. J Arthroplasty. 1999;14(5):560-5.
- 17. Scuderi GR, Insall JN, Windsor RE, Moran MC. Survivorship of cemented knee replacements. J Bone Joint Surg Br. 1989;71(5):798-803.
- Vince KG, Insall JN, Kelly MA. The total condylar prosthesis:10- to 12-year results of a cemented knee replacement. J Bone Joint Surg Br. 1989;71(5):793-7.
- Font-Rodriquez DE, Scuderi GR, Insall JN. Survivorship of cemented total knee arthroplasty. Clin Orthop. 1997;(345): 79-86.

Exactech is proud to have offices and distributors around the globe. For more information about Exactech products available in your country, please visit www.exac.com.

352-377-1140 1-800-EXACTECH www.exac.com





A Great Day in the O.R."